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ABSTRACT

The Teacher Evaluation and Assessment Center (TEAC) was established by the Department of Education at the University of South Florida in 1984 to serve the state in the certification of trainers and observers of the Florida Performance Measurement System (FPMS) and to score and report performance evaluations for special programs. This report describes 1985-1986 TEAC activities in three areas: (1) scoring and reporting results of examinations and observations for the approval of FPMS trainers and observers; (2) scoring and reporting Master Teacher Program observations; and (3) scoring observations and building data tapes for the Beginning Teacher Program. Recommendations to improve the instrumentation, testing and scoring procedures, and data collection and dissemination are presented. The TEAC provided for the production, maintenance, and security of a large library of over 500 criterion videotapes and an automated bank of examination questions. A total of 4,900 observers/trainers completed the approval process for the FPMS summative instruments and 859 completed the approval process for the Student Services instrument. A total of 5,515 candidates were assessed for the Master Teacher Program. Over 6,700 screening observations were collected from 47 school districts for use in the Beginning Teacher Program study. Appendices include: (1) a list of FPMS criterion videotapes; (2) assessment material ordered by county, type, and month for 1985-86; (3) examples of FPMS feedback to observer and trainer; (4) number of approved observers and student services observers by county and type of application; (5) procedures for Master Teacher Program; and (6) Master Teacher Program 1985-86 raw score distributions and percent of applicants in upper quarter of instrument distribution by district. (JAZ)

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TEAC Staff

Donovan Peterson	Co-Director
B. Othanel Smith	Co-Director
Judy Crosby	Coordinator
Jeffrey Kromrey	Research Associate
Lynette Wenner	Supervisor, Master Teacher Program
Pansy DuBose-Pearson	Data Processing Assistant
Kimberly DuPree	Secretary, Clerical Assistant
Brian Gadson	Clerical Assistant
Kellie Smith	Secretary

Florida State Department of Education

Thomas Fisher	Director of Assessment, Testing, and Evaluation
Kenneth Loewe	Administrator of Professional Certification Examination Programs

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Milton Acton, Bay †
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Sara Surrett, Brevard *†
Dianne Gordon, Broward *
Carrie Sedinger, Broward †
Andrew Ramsey, Calhoun *†
Thomas Wagoner, Charlotte *
John Wiegman, Charlotte †
Ronald Kirves, Citrus *†
Lenore Kenny, Clay *†
M. Anne Duyser, Collier *
Herbert Cambridge, Collier †
Frances N. Wilson, Columbia *
James Yopp, Columbia †
Terence Garner, Dade *
Mirta Vega, Dade †
Walter Banull, DeSoto *
Phyllis Nesmith, DeSoto †
Paula Massie, Dixie *†
Larry J. Paulk, Duval *†
Bill McArthur, Escambia *
John E. John, Escambia †
J. R. Miller, Flagler *
Richard D. Conkling, Flagler †
Willie L. Speed, Franklin *
C. T. Ponder, Franklin †
Robert P. Smith, Gadsden *†
Carl Williams, Gilchrist *†
Mazie G. Ford, Glades *†
Barbara Shirley-Scott, Gulf *†
James B. Coe, Hamilton *†
Mike Wilkinson, Hardee *†
Thomas W. Conner, Hendry *
James M. Croteau, Leon *
Theresa Richardson, Leon †
Wyeth A. Read, Levy *
Reba Greene, Levy †
Shirley Batemen, Liberty *†
James Ray, Madison *†
Walter Domalske, Manatee *
Dan Nolan, Manatee †
Chris Vacha, Marion *†
Edward Sheridan, Martin *†
Jeff Weathers, Monroe *†
Karyl Boynton, Nassau *
Eugene Grant, Nassau †
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J. Lamar Lewis, Okeechobee †
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Wilfred F. Still, Orange *
Pam McNab, Orange †
Earl Reeder, Osceola *†
Elizabeth Weston, Palm Beach *†
John Joyce, Pasco *†
S. Anne Wilson, Pinellas *†
Donna Mitchell, Polk *
Carol Johnson, Polk †
Evelyn L. Schellenberger, Putnam *
Duane A. Drause, Putnam †
Susan Yocius, St. Johns *
Donald R. Wilson, St. Johns †
Mary Mosley, St. Lucie *
Thomas J. Filipkowski, St. Lucie †
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Lori Nielson, Hillsborough †
Tommie E. Hudson, Holmes *
Gerald Commander, Holmes †
Katherine Washington, Indian River *
Deborah Dillon, Indian River †
George Riley, Jackson *
Gladys Williams, Jackson †
Elizabeth Messer, Jefferson *
Dorothy K. Bishop, Jefferson †
Dolores H. Ceraso, Lafayette *†
Melanie Young, Lake *
Norval Brown, Lake †
Susan Dietz, Lee *
Scott Watson, Lee †
Charles G. Swaggerty, Seminole †
Larry Ross, Sumter *
Millie Mizell, Sumter †
O. P. Warren, Suwannee *
Donald B. Steele, Suwannee †
Evelyn Karakitosios, Taylor *†
Tommy Mobley, Union *†
Cynthia L. Pino, Volusia *†
Annie Ruth Perryman, Wakulla *†
Janet Campbell, Walton *†
Hugh Balboni, Washington *†
Mary Hanlon, Fl. Sch Deaf & Blind *
Ella Jean Washington, Fl. Sch Deaf & Blind†
Donna McCaffrey, A. D. Henderson *†
John Jenkins, P. K. Yonge *
Chris M. Morris, P. K. Yonge †
Ozel W. Martin, FAMU High *†
Donna L. McCaffrey, FAU *†
Leon Weissberg, Private 98 *†
Herman E. Lawson,Hope Lutheran Schools*†

* Master Teacher Program
† Beginning Teacher Program

Abstract and Recommendations

Teacher
Evaluation and
Assessment
Center

1985 -1986

University of South Florida

SUMMARY

This is the second annual report of the Teacher Evaluation and Assessment Center (TEAC). The TEAC was established by the State Department of Education at the University of South Florida to serve the State in the certification of Florida Performance Measurement System (FPMS) trainers and observers, and to score and report performance evaluations for special programs. Performance evaluations were scored for two special programs this year - - the Master Teacher Program and the Beginning Teacher Program.

Certification of FPMS Trainers and Observers

The TEAC provided for the handling of assessment materials and the scoring and reporting of assessments of trainers and observers for purposes of approved use of the FPMS. This includes assessments of trainers and observers for the FPMS summative instrument and the Student Services instrument. The TEAC also receives and maintains lists of approved observers for the Library/Media instrument and the TADS system.

Assessments for approved use of the FPMS summative instrument and the Student Services instrument include a passing score on cognitive examinations on the research base for those instruments and on coding procedures and a passing score on coded observations of videotaped classes or conferences. Assessments are designed to sample the knowledge of trainers and observers on the research on teacher effectiveness and conferring and coding procedures and to test their accuracy in using either of these two instruments.

Assessments were conducted following training for initial certification of observers/trainers and observer/trainer updates. Observers and trainers certified last

year were required to be updated this year to maintain their status. Updates are designed to introduce changes in the observation systems and to retest observer/trainer knowledge and coding accuracy.

The TEAC provides for the production, maintenance and security of a large library of criterion video tapes (over 500 tapes) and an automated bank of examination questions as well as several thousand copies of examinations.

A total of 4,900 observers/trainers completed the approval process for the FPMS summative instrument this year -- 3,845 updates and I,055 initially certified. Of the total, 1,275 were principals, I,225 assistant principals, I,I51 teachers and the remainder were deans, county level personnel, etc. The average passing rate this year was 89 percent.

A total of 859 observers/trainers completed the approval process for the Student Services instrument this year -- 786 updates and 73 intially certified. Of the total, 174 were principals, 153 assistant principals, 33 teachers with the remainder being other positions, or persons that did not list their position on the assessment forms.

At the end of June, TEAC records show 455 Library/Media approved observers/trainers and 809 approved TADS observers.

Recommendations

I. The cognitive examinations on the research and the coding manual for the FPMS summative instrument should be combined to reduce the number of files maintained by the TEAC, reduce the number of exams taken by participants and reduce the time required to take the assessments.

2. Additional criterion video tapes should be made at various grade levels and subject areas to reduce the possibility of participants viewing the same tape more than once.

3. The item bank for the FPMS research base is adequate (approximately 500 items), but additional items need to be developed to test basic coding rules which provide evidence that observers/trainers have learned the rules.

Master Teacher Program

This is the second year the TEAC has scored and reported results of performance evaluations for the Master Teacher Program. Four instruments were used to assess candidate performance -- FPMS summative instrument, TADS-MTP, Library/Media and Student Services. A total of 5,515 candidates were assessed in the 85/86 administration of the Master Teacher Program. Each candidate submitted a minimum of two observations on one of the four instruments resulting in 12,450 instruments processed by the TEAC for this year's program.

The FPMS summative instrument was used as a basis for determining candidate performance evaluation scores for 79 percent of the candidates.

Scoring of the TADS instrument is conducted by summing the number of items marked for each category into a total instument score. The Library/Media instrument is scored by calculating the proportion of indicators checked for each item and summing these proportions. Scoring the FPMS and Student Services instruments is conducted by scaling items using the interquartile method, adjusting for lesson length, summing item quartile scores and adjusting total scores for instruction format. Total scores are averaged accross two or more observations and averaged scores are converted to T-scores.

Average scores tended to increase with time in last year's administration of the program, but they remained fairly constant this year. It must be noted, however, that the average scores on two instruments (TADS and Library/Media) were near or at the top score on those instruments. The distributions on these two instruments were

heavily "J" shaped (TADS skewness = -3.36, Library/Media = -l.63) while the FPMS and Student Services distributions were relatively normal (FPMS elementary skewness = -0.31, FPMS secondary = -0.15, Student Services = -0.36).

The incidence of aberrant (unusual) observations, either very high or very low, remained approximately the same on the FPMS summative instrument this year as it was last year, slightly over one percent. This is the only instrument for which an aberrance check has been developed.

Distribution of awards across subject areas remained reasonably equal again this year with the exception of Special Education where a higher percentage of candidates passed the performance evaluation. A larger difference in the percentage of awards occurred across instructional modes this year than last year with candidates using a combination of all modes passing the performance evaluation almost twice as often as those using lecture only. There appears to be fairly equal distribution of candidates passing the performance evaluations this year, with the exception of sixth grade where a somewhat higher percentage is reported as passing.

The following recommendations are suggested as means for improving the validity and reliability of performance evaluations for purposes of award programs such as the recently legislated Career Achievement Program.

Recommendations

Based upon the experiences of the TEAC in scoring and analyses of MTP observations and distributions, the following recommendations are made for future applications of classroom performance measures in teacher evaluation:

1. Utilize standards lower than the 75th percentile. This has already been incorporated in the Career Achievement legislation, and its maintenance is

encouraged. Lower standards provide rewards to a larger number of candidates and leads to a greater degree of acceptance by the candidates of the evaluation process.

2. Create percentile distributions within districts. This has also been incorporated in recent Career Achievement legislation. Within-district ranking guarantees parity across districts and reduces the influence of factors that lead to imbalances of awards across districts. Districts should, however, have at least 30 candidates to create within-district score distributions.
3. Randomly assign observers within districts so that no person observes in his/her school. This procedure will reduce the tension between principals and teachers which occured in the MTP. Further, this procedure will reduce the tendency to positively or negatively bias observations.
4. Increase the number of classroom observations from two to four -- two observations by each of two observers. This procedural modification will increase the reliability of final scores as well as increase the validity of the performance evaluation by providing a more representative sample of teacher performance.
5. Establish new norms in each academic year. This will discourage the practice of biasing observations in attempts to surpass previous standards and avoid the psychometric incongruity of having, for example, 43 percent of the candidates scoring in the top 25 percent of a distribution as was the case in the 85/86 MTP.
6. Examine the capability of each instrument used in the MTP for its ability to discriminate at key percentile points prior to their approval for use in other programs such as the Career Achievement Program. As currently written,

districts must discriminate at the 50th percentile for the Level II and at the 90 th percentile for Level III. Not all of the instruments used in the MTP are capable of doing this.

7. Establish policies for assessing observations for aberrance. This procedure provides an important quality check on individual observations and protects candidates from the undue influence of unusual situations which may occur during performance evaluation.

Alternative Recommendations

The recommendations made above apply to teacher evaluation programs that are district-based. They apply to the new Career Achievement Program because the legislation was written to be district-based. These recommendations are designed to reduce a number of sources of error caused, for example, by observer bias.

There are disadvantages, however, in making some of the changes recommended above. The disadvantages are caused by moving from a statewide data base for teacher evaluation to a district base. The disadvantages include the following:

1. Recommendation 2 calls for creation of percentile distributions within districts. While district distributions may decrease the incidence of practice such as observer bias that leads to error in evaluation and guarantee parity of award distribution across districts, it narrows the comparison of performance from the much larger state level pool of applicants to the smaller, and therefore potentially less accurate district distribution. This is particularly true in smaller districts where the number of participants at any given level within the Career Achievement Program is limited. If percentile scores are based upon district distributions, as is the intent for the Career Achievement Program, a state

distribution should also be maintained as a comparative measure of teacher performance among districts. Maintenance of a state distribution is predicated on the use of common criteria and instruments for evaluating teachers across districts.

2. Recommendation 5 calls for norms to be established each year to discourage the practice of inflating scores to award more teachers. The disadvantage of this recommendation is that it makes the award dependent upon the standard and not performance. For example, a teacher scoring at the 50th percentile of the district distribution in year one, given the same performance in year two, may only score at the 40th percentile if the average scores increase from the first to the second year. If the change in average score is caused by observer bias, renorming each year may be fair to adjust for unjustified inflation of scores. If, however, the change in average scores is caused by better performance, then the teachers evaluated in the first year have an unfair advantage over the teachers evaluated in the second year.

   An alternative recommendation is for the state to examine the advantages and disadvantages of using state teams of trained and approved observers in the Career Achievement Program. These observers should be selected randomly from a list of qualified observers and be changed on a rotating basis. If state teams of observers are used, state norms could be maintained without the need to reconstruct normed distributions each year. This would put aside the disadvantages of district distributions cited above.

   If the use of state observers is either not feasible or unacceptable and if the state elects to follow the superior practice of using state norms that do not change each year, another alternative would be to create state audit teams

that would reobserve a sample of teachers each year to determine whether or not district observation scores represent accurate measures of teacher performance.

Classroom performance measures are an important component of any comprehensive teacher evaluation program. The continued use of performance measures in a valid and defensible manner depends upon the incorporation of procedures such as these.

Beginning Teacher Program

Emphasis in the Beginning Teacher Program (BTP) is on assisting new teachers to improve instructional practices. It has high potential for the improvement of education in Florida. To monitor the performance of beginning teachers and report areas of their strengths and weaknesses, performance observations of beginning teachers must be collected, analyzed, and the results reported to individual teachers, school districts, colleges of education and the DOE. The TEAC was contracted this year to initiate procedures and develop computer programs for these purposes.

Rules of the BTP require screening observation at the beginning of the year, formative observations during the year and a summative evaluation at the end of the year. The TEAC, through the DOE, collected over 6,700 screening -- summative -- observations from 47 school districts over the past year. These observations were used in a study of the Beginning Teacher Program reported in the Teacher Evaluation Study, 1985/1986.

The data from these instruments are being examined for their value in identifying the beginning teachers, how many, where they graduated, where and what they are teaching and at what grade level(s). These data may also be used for conducting comparisons of beginning teachers across subjects and districts, identifying areas of

deficiency in performance, and relationships between screening and summative scores and comparisons of scores of graduates among in-state and out-of-state colleges and universities.

For colleges and districts to assess the effectiveness of their respective preservice and inservice teacher training programs and for the State to monitor the quality of education, it is necessary that they have information of the nature cited above. Such information must include the strengths and weaknesses demonstrated by teachers in the classroom.

The FPMS, being validated and normed, can provide these data. Observations must be collected on a regular basis, analyzed and reported in order to be of value in the improvement of education in Florida. These data serve as an objective and accurate basis upon which to work with individual teachers in the improvement of instruction, target inservice training needs for the general improvement of instruction within districts and provide the State with common measures of the quality of performance of beginning teachers.

Recommendations

Based upon the information received on a voluntary basis from school districts through the DOE, the following recommendations are offered for consideration to improve the data collection, processing, analysis and dissemination of data on the Beginning Teacher Program.

1. Make provision in State Board Rule for districts to submit screening and summative observations of beginning teachers to the DOE.

   Purpose: To provide required information for developing a quantitative and qualitative data base on the State's beginning teachers.

2. Make provision in State Board Rule for State approval (certification) of persons who observe beginning teachers.

   Purpose: To insure the competence of observers of teacher classroom performance, thereby improving the accuracy and consistency of observations.

3. Make provision in State Board Rule for a minimum of three screening observations by three different observers and a minimum of three summative observations by three different observers.

   Purpose: To improve the reliability of evaluation scores and to collect a representative sample of the beginning teacher classroom performance at the beginning of the school year and the end of the school year.

4. Continue the development and updating of state normed scores based upon beginning teacher classroom performance observations.

   Purpose: State normed scores provide the basis upon which the DOE and school districts can monitor individual as well as grouped performance scores of beginning teachers as a means of measuring the quality of instruction being delivered on a longitudinal basis.

5. Continue the development and testing of formats for reporting beginning teacher data to individual teachers, districts, colleges of education, and the DOE.

   Purpose: The type of data and the form in which it is reported must be non-threatening to teachers and districts, yet it must provide a means for comparative measures of performance.

6. Study methods and procedures for establishing more direct relationships between observation data and individual and district inservice training programs as well as a more direct relationship between beginning teacher

deficiencies and emphases in preservice teacher training programs.

Purpose: To save time and resources in training and improve the effectiveness of training by targeting areas that are being performed the least effectively.

REPORT OF THE

TEACHER EVALUATION AND ASSESSMENT CENTER

1985-1986

University of South Florida

INTRODUCTION

This is the second annual report of the Teacher Evaluation and Assessment Center (TEAC). The TEAC was established by the DOE at the University of South Florida in 1984 to serve the State in the certification of trainers and observers of the Florida Performance Measurement System (FPMS) and to score and report performance evaluations for special programs.

Specific responsibilities of the TEAC in 1985-1986 included: 1) scoring and reporting results of examinations and observations for the approval of FPMS trainers and observers; 2) scoring and reporting Master Teacher Program observations; and 3) scoring observations and building data tapes for the Beginning Teacher Program. This is a report of those activities.

Certification of FPMS Trainers and Observers

The TEAC provided for the assessment of trainers and observers for purposes of approved use of the FPMS. This activity included maintaining and disseminating criterion video tapes for assessing observer accuracy; duplicating and disseminating two cognitive examinations (one examination on the research base for the FPMS and one for the FPMS Coding Manual); scoring cognitive examinations and observer accuracy tests; providing feedback to persons who fail the observer accuracy test; providing feedback to trainers on passing rates of their trainees; and providing lists of certified observers to school districts and the Department of Education. These services were provided for trainer and observer initial certification and updates.

According to State Board of Education Rule 6A-4.46, Fla. Admin. Code, observers using the FPMS in the Master Teacher Program must be trained and

approved. Two criterion measures were used as the basis for observer approval in the 1984-1985 MTP: 1) a passing score on a cognitive examination on teacher effectiveness research and 2) a passing score on two criterion observations using the FPMS summative instrument. A cognitive examination on the FPMS summative instrument Coding Manual was added as a third criterion measure for trainer and observer certification in 1985-1986.

The TEAC is responsible for security and maintenance of the cognitive examinations and the criterion videotapes, for their distribution to testing sites, and for scoring and reporting results to the DOE to sixty-six Florida school districts and to several special institutions/colleges that use the FPMS.

The criterion videotape library was carried over from the year 1984-1985. No new criterion tapes were made for use in the 1985-1986 program. Seventy two (72) copies were made of existing criterion tapes to accomodate the large number of orders received for purposes of updating or initial assessments of trainers and observers. Videotapes are of varying levels (elementary, middle and secondary) and subjects (mathematics, social studies, science, etc). Appendix A is a list of criterion videotapes.

Cognitive examinations are used to assess applicant knowledge of the six domains of effective teaching (Domains: Knowledge Base of the Florida Performance Measurement System) and rules for coding various teacher behaviors (Coding Manual for the FPMS Summative Instrument). The TEAC maintains an item bank of approximately 500 test items on the FPMS Domains from which 75 items are randomly selected for each form of the examination. Two new examinations were created from this item bank and used, together with some of last year's forms, in the testing of trainer and observer applicants this year.

Persons initially approved as FPMS observers this year were required to pass both cognitive examinations and the criterion observations. Assessments for updates included only the cognitive examination on the Coding Manual, which was new this year, and the criterion observations.

Criterion videotapes and cognitive examinations are numbered and inventoried by the TEAC. Assessment materials are obtained from the TEAC by authorized school district representatives or university personnel. From August, 1985 through April, 1986 the TEAC received 243 orders from 54 districts and special institutions/universities for assessment materials (Appendix B). This represents a 29 percent increase in orders over 1984-1985 for the same period of time.

Names of persons passing the assessments are added to the official list of FPMS observers. The TEAC distributes these lists to district contact persons who notify applicants of the results. Unsuccessful candidates receive feedback on their coding indicating overcoding, undercoding, or accurate coding by item and criterion observation (Appendix C).

Feedback is also provided to trainers giving information on the total number of their trainees that pass and fail. Trainer feedback also lists the items most frequently over or undercoded by their trainees (Appendix D). Feedback is sent to trainers for each assessment. The purpose of trainer feedback is to help them concentrate on items with which their trainees tend to have difficulty coding accurately.

The TEAC also maintains certification files on two special instruments -- Student Services and Library/Media. Certification for using the Student Services instrument requires criterion observations. Procedures similar to those for scoring FPMS summative instrument criterion observations are used in scoring student services

observations. A list of video tapes used for this purpose is in Appendix A. Library/ Media assessments are also scored by the TEAC.

During 1984-1985, the TEAC encountered problems with assessment materials being requested only a few days prior to examination dates, unclear or incomplete information on the front of the instruments, items frequently not summed on the observation side of the instrument, and delays in receiving missing information from districts. These problems were reduced this year by: 1) revising the front of the instrument to reorganize and clarify the required information, 2) adding a column for summing item codes on the observation side of the instrument, and 3) encouraging greater cooperation of district contact persons who were much more efficient in providing missing information to the TEAC.

Results of this year's assessments for purposes of trainer and observer approval are described in the following tables. These tables include materials ordered for FPMS assessments and the number of persons approved by position and by county.

Assessment materials are ordered from the TEAC for regular FPMS initial approval and updates of approved trainers and observers. Assessment materials are also managed by the TEAC for the Student Services instrument. Table 1 shows the number of persons for whom assessment materials were ordered by month, type of instrument, and whether the assessment was intended for initially trained persons or to update previously trained persons.

TABLE 1

Number of Persons for Whom Assessment Materials Were Ordered by Type of Assessment 1985/1986

Type	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Total
FPMS Initial	—	30	325	1302	514	261	266	182	70	290	325	121	3686
FPMS Update	—	-0-	2216	3393	540	220	300	60	250	75	-0-	40	7094
FPMS Retakes	—	-0-	-0-	-0-	-0-	-0-	14	50	62	-0-	-0-	1	127
S.S. Initial	—	-0-	50	110	22	30	240	157	-0-	-0-	30	-0-	639
S.S. Update	—	-0-	-0-	260	368	251	40	-0-	-0-	1	-0-	-0-	920
S.S. Retake	—	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Total	—	30	2591	5065	1444	762	860	449	382	366	355	162	12,466

Most requests for assessment materials this year were for regular FPMS updates followed by regular FPMS initial training assessments. Master Teacher Program deadlines for performance evaluations caused the heaviest number of assessment material requests during the months of October, November and December, although, a substantial number of requests were also made in the spring.

Master Teacher Program performance observations, according to Statute and Board Rule, had to be conducted by two trained and approved persons, one of whom was a principal. Records were, therefore, kept by the TEAC on the number of approved observers by position (Table 2).

Table 2 shows that 65 principals were newly approved as FPMS observers or trainers this year and 1,212 were updated. Those listed as "unknown" did not provide position information on their assessment and those listed as "other" include deans, counselors and any positions listed other than principal, assistant principal or teacher.

TABLE 2

Number of FPMS Approved Observers (Discounting Remediations)
By Position and Type of Application

	Type of Application		
Position	New	Updated	Total
Unknown	187	74	261
Principal	65	1212	1277
Ast. Principal	173	1058	1231
Teacher	552	694	1246
Other	171	842	1013
Total	1,148	3,880	5,028

The month in which the persons listed in Table 2 were approved is shown in Table 3. Note the shift in the number of persons approved compared to the number of persons for whom assessment materials were requested in Table 1 by approximately one month, e.g. November's requests were processed in December, etc. This is accounted for by the approximate time it takes to receive, process, and report results to districts.

There is also a substantial difference between the number of persons for whom materials are ordered (Table 1) and the number of persons approved (Table 3). Most of this difference is accounted for by districts' ordering more materials than needed to assess each group of participants -- a sound practice since it is better to have too many tests than too few. A portion of this difference is accounted for by the number of persons that are not successful in passing the assessment. The average failure rate in the FPMS assessments for observer/trainer approval this year was 11 percent.

TABLE 3

Number of FPMS Approved Observers (Discounting Remediations)
By Month and Type of Application

Table of Date By File

	Type of Application		
Year/Month	New	Updated	Total
*85/08	------	------	------
*09	------	------	------
10	167	154	321
11	82	583	665
12	132	1645	1777
86/01	215	1242	1457
02	98	114	212
03	128	59	187
04	130	28	158
05	74	15	89
06	27	0	27
07	96	39	135
Total	1,149	3,879	5,028

* data combined with October

The TEAC also maintains records of the number of approved FPMS observers by school district and other institutions (Appendix E). The number of observers ranges from one in a few rural districts to 591 in a large urban district.

The same information is reported for approval of Student Services trainers/ observers. Table 4 shows the number of persons approved as Student Services observers by position.

The large number of persons for whom position is listed as unknown is a monitoring problem. Persons assigned as assessment monitors should receive a

TABLE 4

Number of Approved Student Services Observers
(Discounting Remediations)
By Position and Type of Application

	Type of Application		
Position	New	Upd	Total
Unknown	20	383	403
Principal	8	166	174
Ast Principal	29	124	153
Teacher	5	28	33
Other	11	85	96
Total	73	786	859

short period of training (one hour) prior to serving in that capacity to improve the quality of the data on the assessment forms and, consequently obtain, more accurate records of approved observers.

Table 5 shows the number of persons approved as Student Services observers/ trainers by month and whether they were newly (initially) approved this year or approved last year and updated this year.

The number of persons approved as Student Services observers/trainers listed by county is found in Appendix F.

TABLE 5

Number of Approved Student Services Observers By Month and Type of Application

Year/Month	Type of Application		
Frequency	New	Upd	Total
8512	0	46	46
8601	27	668	695
8602	17	20	37
8603	19	24	43
8604	10	0	10
8605	0	26	26
8606	0	2	2
Total	73	786	859

Names of approved TADS observers are also reported to the TEAC by the Dade School District. At the end of June, 1986, TEAC records show 859 approved TADS observers.

Recommendations

1. The cognitive examinations in the research and the coding manual for the FPMS summative instrument should be combined to reduce the number of files maintained by the TEAC, reduce the number of exams taken by participants and reduce the time required to take the assessments.
2. Additional criterion video tapes should be made at various grade levels and subject areas to reduce the possibility of participants viewing the same tape more than once.
3. The item bank for the FPMS research base is adequate (approximately 500 items), but additional items need to be developed to test basic coding rules that provide evidence observers/trainers have been taught and can apply the rules.

Master Teacher Program

The Associate Master Teacher endorsement for the State Master Teacher Program was initiated in 1984-1985. The TEAC was under contract with the Department of Education for scoring performance evaluations during the initial year and this year -- the second year of implementation.

Criteria for eligibility remained the same in 1985-1986 as they were in 1984-1985, but the award changed in both amount and number of years that the candidates were certified to receive the award. The TEAC was responsible for receiving observations, notifying candidates of receipt of observations, processing, scoring and developing data tapes for the Department of Education.

During 1985-1986, the TEAC sent an averaged observation score in the form of a T score to the Department of Education and the Department notified candidates of their performance evaluation score. This was a change from last year when performance evaluation scores were sent to candidates directly from the TEAC. The new procedure is an improvement since the Department was able to add the additional point values, if any, to the candidates' scores and the candidates received one rather than two scores which tended to be less confusing.

Four instruments were used to assess candidates' classroom performance:

1. Florida Performance Measurement System, Summative Instrument (FPMS).
2. Teacher Assessment and Development System - Master Teacher Program (TADS - MTP).
3. MTP Library Media Instrument.
4. MTP Student Services Instrument.

This section of the TEAC Report for 1985-1986 includes descriptive data on the use of these instruments in this year's administration of the Master Teacher Program, comparisons with the 1984-1985 administration of the Master Teacher Program and selected analyses of the performance of these instruments in this program. The procedures followed by the TEAC in processing MTP observations is reported in Appendix G.

As was the case last year, candidates were observed using one of the four instruments listed above, or a combination of two instruments depending upon their area of specialization. This resulted in ten distributions by instrument type as set forth in Table I.

TABLE 1

Master Teacher Candidates: Instruments Used

Distribution	84-85 Frequency	84-85 Percent	85-86 Frequency	85-86 Percent
FPMS Primary	8,027	34.0	2,158	35.7
FPMS Secondary	10,381	44.0	2,646	43.8
TADS	3,222	13.6	673	11.1
Student Services	1,559	6.6	509	8.4
FPMS + LM Primary	146	0.6	22	0.4
FPMS + LM Secondary	145	0.6	25	0.4
FPMS + SS Primary	111	0.5	13	0.2
FPMS + SS Secondary	23	0.1	1	0.0
TADS + LM	24	0.1	2	0.0
TADS St. Services	5	0.02	--	--
Total	23,643		6,049	

The number of candidates observed in 1985/86 with each instrument or combination of instruments ranged from one to 2,646. A total of 5,515 candidates

submitted a minimum of two observations on one of the four instruments resulting in 12,450 instruments processed by the TEAC. The FPMS summative instrument was used as a basis for determining candidate performance evaluation scores for 79 percent of the total number of applicants.

Table I also includes the same data from I984-I985. Comparisons can be made regarding the number of candidates between the two years and the use of instruments for this purpose. These data show that although the number of candidates observed with each instrument reduced significantly from 1984-1985 to 1985-1986, the proportion of candidates observed by each instrument remained approximately the same.

TABLE 2

TEAC Processing of MTP Instruments
Comparison of 1984/85 with 1985/86

	Monthly Totals	
Month	1984/85	1985/86
January	8463	185
February	27600	3761
March	13600	3423
April	740	4955
May	883	107
June	803	19
July	50	----
August	22	----
September	862	----
October	313	----
November	7	----
December	10	----
TOTAL	53353	12450

Shown in Table 2 are the number of instruments processed by the TEAC for the Master Teacher Program in 1984-1985 and 1985-1986. These data are of value in planning staff and facility requirements for processing instruments of this nature in an award-type program. In 1984-1985, the months when most observations were received by the TEAC were January through March. A considerable number were received in April through June. The summer months of July and August were slow while a substantial number were received in September and October. Most of the observations received in September and October were reevaluations. The 1985-1986 data show a similar pattern. However, the data are incomplete after June for 1985-1986 which was the cut-off date for writing this report.

Instrument Scoring

Scoring of the TADS instrument is conducted by summing the number of items marked for each category into a total instrument score and averaging the scores of two or more observations/evaluations. Percentile scores for the TADS instrument were derived by locating the averaged value of two observations on the 1984-1985 MTP normed distribution for that instrument. The Library/Media instrument is scored by calculating the proportion of indicators checked for each of the 25 items and summing these proportions. Since the Library/Media instrument was revised this year, percentile scores were derived by renorming scores collected during this year's administration of the program.

Scoring of the FPMS and Student Services instruments is conducted by scaling items using the interquartile method, adjusting for lesson length (Norming Study, 1984), summing item quartile scores (inverting scores on ineffective indicators), and adjusting total scores for instructional format. Total observation scores were averaged across

two or more observations and the averaged score located on the normed distributions developed for the 1984-1985 administration of the Master Teacher Program.

Scores from each of the foregoing distributions were then converted to T-scores to create a common scale for all four instruments. T-scores are then averaged for candidates who are evaluated with more than one instrument, for example, FPMS and Library/Media. Master tapes of T-scores were sent to the Department of Education for the inclusion of additional points, if appropriate, and reporting of percentile scores to candidates.

Score Distributions

Information about the performance of each of the four instruments used in the Master Teacher Program is available by examining measures such as average scores over time, shape of each distribution, the range of scores for each instrument, and the number of points of discrimination in various score ranges on each distribution. Data of this nature can also be compared to last year's data to determine the degree and nature of changes that may occur in each instrument across time.

First, we examined average scores (Median scores) by instrument from December through June of 1984-1985 and 1985-1986 (Table 3).

TABLE 3

Average Scores by Month and Instrument 1984-1985 and 1985-1986

Obs Month	1984/85 Median	1984/85 Number	1985/86 Median	1985/86 Number
		FPMS		
December	34	1102	38	44
January	35	8608	37	554
February	35	28616	37	3632
March	35	378	38	2022
April	39	475	38	3535
May	40	1090	39	40
June	38	171	40	7
		Library/Media		
December	--	0	25	1
January	23	46	--	0
February	22	628	23	6
March	23	26	24	16
April	--	0	24	75
May	25	12	--	0
June	21	2	--	0
		Student Services		
December	23	2	31	1
January	27	79	29	18
February	26	3282	29	348
March	26	29	29	325
April	27	18	30	376
May	29	74	27	5
June	29	42	27	3
		TADS		
December	72	803	82	1
January	75	2820	82	211
February	76	3214	81	434
March	80	61	81	471
April	81	82	81	257
May	82	235	65	3
June	81	98	80	1

Table 3 shows that the median scores on the FPMS tended to increase with time during 1984-1985 while they fluxuated only one point during 1985-1986 with the exception of May and June when there are not adequate cases for comparative purposes. Median scores during the first four months of 1984-1985 tended to be three to four points lower than the later months of that year while the later months compare favorably with median scores of 1985-1986.

Similar trends were found last year in the TADS and Student Services instruments as were found in the FPMS, i.e. median scores increased across time. Only Library/Media remained fairly constant across time. However, this instrument showed little discrimination (two or three points) at the top end of the scale from the first which precluded an upward shift of the median score. The TADS median score moved up fully 10 points across time in 1984-1985 to the point where there was a ceiling effect on that instrument by March.

Median scores in 1985-1986 tended to be more stable across time than they were in 1984-1985. Scores from the last half of last year's administration of the Master Teacher Program are reasonably predictive of the scores obtained in this year's program. This statement must be tempered, however, because of the ceiling effect on the TADS and Library/Media instruments.

This problem is further understood through comparison of central tendency measures and analysis of the shape of the distribution for each instrument. Tables 4 - 8 and Appendix H contain these data. Table 4 shows a comparison of score distributions of the 1984-1985 MTP observations for the FPMS elementary candidates, Table 5 shows the FPMS secondary distribution. Table 6 shows the TADS distribution, Table 7 shows the Student Services distribution and Table 8 shows the Library/Media distribution.

The FPMS elementary distribution shows the mean and median scores to be approximately equal in both years and the modal score slighly higher. There was an increase of average scores from l984-l985 to l985-l986 of approximately two scale points. Measures of skewness and kurtosis show a relatively normal distribution of scores (Appendix H shows a histogram and boxplot of these distributions). The range of raw scores for this distribution was from l5.5 through 53.5. There are 44 points of discrimination from the 75th through the 99th percentile. From the 72nd through the 79th percentile, there are 14 points of discrimination (Appendix H).

TABLE 4

A Comparison of MTP Score Distributions for 1984/85 and 1985/86

FPMS Elementary

Characteristic	1984-1985	1985-1986
Central Tendency		
Mean	37.25	39.58
Median	37.50	39.50
Mode	38.50	41.00
Dispersion		
Std Deviation	5.61	5.11
Quartile Range	6.50	7.50
Skewness	-0.20	-0.31
Kurtosis	0.06	0.32
Sample Size	7922 pairs	2193 pairs

Data concerning the number of points of discrimination are important in determining the degree to which the instrument differentiates among candidates above

and below the standard. The standard set for passing the performance evaluation for the Master Teacher Program was the 75th percentile.

The FPMS post-elementary distribution shows approximately the same characteristics as the FPMS elementary distribution, i.e. average scores were approximately two to three points higher the second year, and with a normal distribution. The only difference of note is that the average scores for secondary candidates is lower than those for elementary candidates which was a finding in the original norming study and the reason for creating two separate distributions. Scores of the secondary level teachers ranged from l4 through 55. There were 92 points of discrimination from the 75th percentile through the 99th percentile and there were 22 points of discrimination between the 70th and 79th percentiles.

TABLE 5

A Comparison of MTP Score Distributions for 1984/85 and 1985/86

FPMS Post-elementary

Characteristic	1984-1985	1985-1986
Central Tendency		
Mean	32.78	35.46
Median	33.00	35.50
Mode	33.00	36.50
Dispersion		
Std Deviation	5.70	5.85
Quartile Range	7.50	8.00
Skewness	0.05	-0.15
Kurtosis	-0.08	0.09
Sample Size	10296 pairs	2658 pairs

Table 6 shows the TADS distribution. The mean score on the TADS instrument increased approximately 7 points from the 1st to the 2nd year of the MTP. The median score increased approximately the same amount while the modal score was an 82 for both years which is the top score on that instrument. The distribution of the TADS instrument was skewed significantly in l984-l985 (-l.36) with a significant increase of

TABLE 6

A Comparison of a MTP Score Distributions for 1984/85 and 1985/86

TADS

Characteristic	1984-1985	1985-1986
Central Tendency		
Mean	70.91	77.99
Median	73.50	81.00
Mode	82.00	82.00
Dispersion		
Std Deviation	9.84	7.19
Quartile Range	12.50	4.50
Skewness	-1.36	-3.36
Kurtosis	1.92	14.51
Sample Size	3198 pairs	673 pairs

skewness in l985-l986 (-3.36). Scores ranged from 2l through 82, and this instrument did not discriminate at the 75th percentile in l985-l986. The top score of 82 was attained by 31 percent of the candidates when combining two observations.

The Student Services score distribution shows the measures of central tendency to be approximately the same each year of the MTP with the exception of the modal

score in the first year which was 3 points higher than the mean and median and the mean and median scores were 3 points higher in the 2nd year. The score distribution was approximately normal with scores ranging from l8 through 37. There were 10 points of discrimination from the 75th through the 99th percentile, and 3 points of discrimination from the 70th through the 79th percentile.

TABLE 7

A Comparison of MTP Score Distributions for 1984/85 and 1985/86 Student Services Instrument

Characteristic	1984-1985	1985-1986
Central Tendency		
Mean	26.11	29.05
Median	26.00	29.50
Mode	29.00	29.50
Dispersion		
Std Deviation	3.94	3.56
Quartile Range	5.50	5.50
Skewness	-0.27	-0.36
Kurtosis	0.41	-0.23
Sample Size	1663 pairs	521 pairs

The distribution of the Library/Media instrument is presented in Table 8. The mean score on this instrument increased approximately 3 points from the first to the second year of its use in the MTP. Similarly, the median increased 2 points and the mode was unchanged at 25 points which is the maximum score for this instrument. The changes in distribution shape are similar to the changes of the TADS distribution, although to a lesser extent. The standard deviation decreased, kurtosis increased, and

a more pronounced negative skew is evident. Scores ranged from 11.8 to 25. From the 75th to the 99th percentile, five points of discrimination were obtained, while from the 70th to the 79th percentile, only 2 points were obtained.

Table 8

A Comparison of MTP Score Distributions for 1984/85 and 1985/86

Library/Media Instrument

Characteristic	1984/85	1985/86
Central Tendency		
Mean	19.82	22.53
Median	21.50	23.75
Mode	25.00	25.00
Dispersion		
Std. Deviation	4.98	2.99
Quartile Range	6.50	3.83
Skewness	-1.22	-1.63
Kurtosis	0.91	2.59
Sample Size	347 pairs	49 pairs

Aberrant Observations

A procedure for detecting aberrant (i.e. - unusual) observations for the FPMS instrument was developed during the 1984/85 administration of the MTP. However, since statute and Board Rule make no provision for this procedure, the data were used for research purposes only.

Observations are identified as aberrant when unusually high or low frequencies of teacher behaviors are recorded on the FPMS summative instrument or when inappropriate procedures are followed by the observer when coding the instrument. A comparitive analysis of aberrance during the 84/85 and 85/86 MTP is presented in Table 9. In the first year's administration of the MTP, 560 observations (1.3%) were identified as aberrant. In 1985/86, 158 observations (1.6%) were identified as aberrant.

The continued occurrence of aberrance in the second year of the MTP, and its rate being essentially unchanged across years reinforces its value as a quality check. The nature of performance observations requires monitoring of the instrument's use and results much as standardized tests require reporting of unusual incidents during test administration or unusual scoring results. Such a quality check should be developed for each instrument used in performance evaluations and should be recognized in State Board Rule.

TABLE 9

Frequencies of Aberrant Observations Across Two Years of MTP

		Year 84/85	85/86
Aberrant	N	560	158
	%	1.3%	1.6%
Non-aberrant	N	41086	9621
	%	98.7%	98.4%

Distribution of Awards

A comparison of proportions of applicants scoring at or above the 75th percentile for each year of the MTP was conducted. Such proportions were compared across academic subject areas, instructional modes, and grade levels. The results are printed in Tables 10, 11, and 12.

The percent of applicants in the top quarter of each subject area on the FPMS instrument are reported in Table 10. For the 85/86 year, the percentages ranged from 35 percent (in both Business/ Vocational and Home Ec./Art categories) to 51 percent (Special Education). As occurred in 84/85, the distribution across subjects is relatively equitable, with the exception of Special Education teachers who were more likely to score in the top quarter than teachers from other subject areas. All subject areas showed more than 25% of the applicants in the top quarter in the 85/86 MTP. This resulted from using the 84/85 norms while average scores increased in 85/86.

TABLE 10

Distribution Across Subject Area

Subject	Number of Applicants Year 1984/85	1985/86	Percent in Top 25% of Final Distribution Year 1984/85	1985/86
Language Arts/Social Science	7461	1377	27.6	45
Math/Science	4875	1186	25.8	49
PE/ROTC	807	163	20.6	48
Business/Vocational	1297	542	24.1	35
Home Economics/Art	494	332	25.5	35
Special Education	1566	472	36.0	51
Student Services	1281	16	29.5	44
Media		44		48
Other		701		42

Table 11 presents the percentage candidates attaining a score at or above the 75th percentile across instructional modes. The percentages range from 29 percent (Lecture Only) to 51 percent (Combination of Lecture, Discussion, and Independent Work). As occurred in 84/85, the highest percentage of awards was the combination of three instructional modes.

Table 11

Distribution Across Instructional Mode

Instructional Mode	Number of Applicants Year 1984/85	1985/86	Percent in Top 25% of Final Distribution Year 1984/85	1985/86
1. Lecture	280	97	23.9	29
2. Discussion, Recitation	3278	912	24.3	41
3. Independent Study	492	94	27.6	37
1 and 2	3977	1327	28.4	43
1 and 3	482	143	21.0	42
2 and 3	3924	858	24.0	42
1, 2, and 3	5744	1393	31.2	51

Distribution across grade levels is presented in Table 12. The percentage of candidates in the top quarter in 1985/86 ranged from 22.5 percent (fifth grade) to 38.8 percent (sixth grade). The sixth grade teachers also showed the highest percentage in the top quarter in 1984/85. This discrepancy may indicate that sixth grade teachers should be scored in the Elementary distribution, which would reduce its notably large proportion in the top quarter.

Table 12

Distributions by Grade

Grade	Number of Applicants Year 1984/85	Number of Applicants Year 1985/86	Percent in Top 25% of Final Distribution Year 1984/85	Percent in Top 25% of Final Distribution Year 1985/86
K	331	1138	47	32.3
1	319	1216	48	33.4
2	309	1283	47	27.8
3	394	1466	44	26.3
4	348	1431	39	23.1
5	358	1309	39	22.5
6	299	1178	64	38.8
7	237	1398	50	28.1
8	286	1429	49	24.8
9	390	1536	42	24.3
10	450	1419	45	22.8
11	456	2123	45	24.0
12	299	832	40	26.8
Adult	311	310	34	34.0

The percentage in the top quarter of the 85/86 distribution by school district is reported in Appendix I. The percentages ranged from 0 percent to 100 percent; but, as expected, such extreme percentages occur in districts with very few applicants. Considering only districts with at least 30 candidates in 1985/86 (n=28), the percentages ranged from 15 percent to 73 percent. Considering only districts with at least 100 candidates (n=17), the percentages still ranged from 25 percent to 73 percent. In both of these cases, the median percentage of candidates in districts is 43 percent.

The wide variations in candidate performance across districts is likely to be attributed to a number of factors including:

1. Voluntary participation in the MTP. The teachers assessed may not be representative of the Florida teacher population.

2. Fewer numbers of teachers being assessed in the 1985/86 MTP. This also reduces the probability of the teachers assessed being representative of the Florida teacher population.
3. Differences in the provision of training across districts.
4. Some districts advised teachers of the date and time of the observations, allowing special preparation.
5. Some districts encouraged preparation of special lessons, while others encouraged the observation of typical lessons.
6. Observer bias may contribute to variations in some cases.

Recommendations for Future Applications

Based upon the experiences of the TEAC in scoring and analyses of MTP observations and distributions, the following recommendations are made for future applications of classroom performance measures in teacher evaluation:

1. Utilize standards lower than the 75th percentile. This has already been incorporated in the Career Achievement legislation, and its continuation is encouraged. Lower standards provide rewards to a larger number of candidates and leads to a greater degree of acceptance by the candidates of the evaluation process.
2. Create percentile distributions within districts. This, too, has also been incorporated in recent legislation. Within-district ranking guarantees parity across districts and reduces the influence of the six factors cited above that lead toward imbalances of awards across districts. Districts should, however, have at least 30 candidates to create within-district score distributions.
3. Randomly assign observers within districts so that no person observes in his/her school. This procedure will reduce the tension between principals

and teachers which occured in the MTP. Further, this procedure will reduce the tendency to positively or negatively bias observations.

4. Increase the number of classroom observations from two to four -- two observations by each of two observers. This procedural modification will increase the reliability of final scores as well as increase the validity of the performance evaluation by providing a more representative sample of teacher performance.
5. Establish new norms in each academic year. This will discourage the practice of biasing observations in attempts to surpass previous standards and avoid the psychometric incongruity of having, for example, 43 percent of the candidates scoring in the top 25% of a distribution as was the case in the 85/86 MTP.
6. Examine instruments used in the MTP for its ability to discriminate at key percentile points prior to their approval for use in other programs such as the Career Achievement Program. As currently written, districts must discriminate at the 50^{th} percentile for Level I and at the 90^{th} percentile for the Level II in the Career Achievement Program. Not all of the instruments used in the MTP are capable of doing this.
7. Establish policies for assessing observations for aberrance. This procedure provides an important quality check on individual observations and protects candidates from the undue influence of unusual situations which may occur during performance evaluation.

Alternative Recommendations

The recommendations made above apply to teacher evaluation programs that are district-based. They apply to the new Career Achievement Program because the

legislation was written to be district-based. These recommendations are designed to reduce a number of sources of error caused, for example, by observer bias.

There are disadvantages, however, in making some of the changes recommended above. The disadvantages are caused by moving from a statewide data base for teacher evaluation to a district base. The disadvantages include the following:

1. Recommendation 2 calls for creation of percentile distributions within districts. While district distributions may decrease the incidence of practice that leads to error in evaluation and guarantee parity of award distribution across districts, it narrows the comparison of performance from the much larger and, therefore, potentially less accurate district distribution. This is particularly true in smaller districts where the number of participants at any given level of the career ladder is limited. If percentile scores are based upon district distributions, as is the intent for the Career Achievement Program, a state distribution should also be maintained as a comparative measure of teacher performance among districts. Maintenance of a state distribution is predicated on the use of common criteria and instruments for evaluating teachers across districts.
2. Recommendation 5 calls for norms to be established each year to discourage the practice of inflating scores to award more teachers. The disadvantage of this recommendation is that it makes the award dependent upon the standard and not performance. For example, a teacher scoring at the 50th percentile of the district distribution in year one, given the same performance in year two, may only score at the 40th percentile if the average scores increase from the first to the second year. If the change in average score is caused by observer bias, renorming each year may be fair to adjust for unjustified inflation of

scores. If, however, the change in average scores is caused by better performance, then the teachers evaluated in the first year have an unfair advantage over the teachers evaluated in the second year.

An alternative recommendation is for the state to examine the advantages and disadvantages of using state teams of trained and approved observers in the Career Achievement Program. These observers should be selected randomly from a list of qualified observers and be changed on a rotating basis. If state teams of observers are used, state norms could be maintained without the need to reconstruct normed distributions each year. This would put aside the disadvantages of district distributions cited above.

If the use of state observers is either not feasible or unacceptable and if the state elects to follow the superior practice of using state norms that do not change each year, another alternative would be to create state audit teams that would reobserve a sample of teachers each year to determine whether district observation scores represent accurate measures of teacher performance.

Classroom performance measures are an important component of any comprehensive teacher evaluation program. The continued use of performance measures in a valid and defensible manner depends upon the incorporation of procedures such as these.

The third major responsibility of the TEAC in this reporting year was the receipt, processing and reporting of data derived from screening and summative observations of beginning teachers. The Beginning Teacher Program (BTP) has high potential for influencing the quality of education in Florida. This claim is based upon the legislated emphasis on the formative evaluation of beginning teachers, an emphasis which focuses on improvement of classroom performance.

This part of the report describes the function of a centralized data processing agency in the collection, processing and reporting of data that provide a basis of comparison for school districts to examine the effectiveness of their inservice programs for improving beginning teacher performance, and colleges can evaluate the adequacy of their students' classroom entry skills yearly and across time. In addition, the Department of Education can measure trends of beginning teacher performance over time. Such data derived from centralized scoring provides a basis for longitudinal studies.

TEAC Services

According to the State Board of Education rule, screening observations of beginning teachers are conducted early in the fall. These observations are used to identify areas in which beginning teachers can make improvements in their classroom performance. A minimum of three formative observations are then conducted during the school year to remediate or improve targeted areas of performance. Summative evaluation is then conducted in the spring to determine the degree to which improvement of instruction is apparent and to provide documented support for demonstrated state competencies.

Screening and summative observations have been collected by the DOE on a voluntary basis from districts using the FPMS since the spring of 1985. The DOE receives, records, and mails these observations to the TEAC for processing. Table I shows the number of observations received by the TEAC from the DOE between August 1985 and July 1986.

Table I

Beginning Teacher Observations Received by the TEAC

1985 - 1986

Month	Year	Number of Observations
August	1985	1,128
Sept.	1985	842
March	1986	3,116
June	1986	1,091
July	1986	604
	Total	6,781

Of the total received, 1,970 were summative observations received for the 1984-1985 school year, and the remaining 4,811 were observations conducted during the 1985-1986 school year.

Upon receipt of observations from the DOE, TEAC staff clean and batch the observations, and send them to a data processing agency for key punching. Key punched observations are returned to the TEAC for storage together with magnetic data tapes. Information from data tapes is transferred to the Central Floida Regional

Data Center's IBM 3081 main-frame computer for analysis. These data were used this year in a study conducted to examine differences in beginning teacher behavior as measured by pre and post FPMS observations (Teacher Evaluation Study, 1985-1986.)

These data may be used in the longitudinal investigation of such research questions as:

1. How many beginning teachers are employed by each school district each year and how many continue to teach in those districts in ensuing years?
2. What proportion of beginning teachers graduate each year from Florida institution of higher education by institution?
3. What proportion of beginning teachers teach at each grade level and in what subject areas?
4. How many students do beginning teachers have in each class? What is the socio/economic status of their students and how do their students rank academically?

By combining the scores of a large number of beginning teacher observations across districts over time, normed scores can be developed that may serve as a basis for addressing any number of questions. Examples of such questions include:

1. How do the performance scores of beginning teachers compare across subjects, colleges, and districts?
2. What behaviors are most in need of improvement among various groups of beginning teachers ?
3. Does a relationship exist between screening scores (beginning) and summative scores (ending)?

4. How do the performance scores of graduates of in-state colleges of education compare with the graduates from out-of-state colleges of education? (A preliminary exploration of this question may be found in Chapter II of the Teacher Evaluation Study, 1985-1986.)
5. How do the performance scores of college of education graduates compare with the performance scores of non-college of education graduates?
6. What influence do such factors as SES, race/ethnicity, rural/urban settings, proximity to institutions of higher education, etc., have on beginning teacher initial performance and changes during service?

These are only examples of the avenues of inquiry that are available through the centralized collection and analysis of beginning teacher screening and summative evaluations.

A limited number of analyses have been completed to this date, based upon the observations cited in Table I. Descriptive data include the following three tables that list the number of observations collected to date by type, the colleges where the teachers graduated and the school district where each beginning teacher was employed. The data reported in these tables were submitted on a voluntary basis. Due to errors and omissions, it was not possible to pair a substantial number of pre (fall) and post (spring) observations by teacher. This precluded the possibility of reporting numbers of teachers and instead required reporting numbers of observations. Also, several school districts are not represented in these data (see Table 4). If all school districts submitted pre and post beginning teacher observations to the DOE on a regular basis, these problems would not be present and the data base could be built on numbers of teachers which would be more meaningful.

Table 2

Number of Screening/Summative Observations

I986

Type of Observation	Frequency	Percent
Screening	3345	69.5
Summative	1176	24.5
Unknown	290	6.0
Total	4811	100.0

Table 2 shows that the majority of observations provided voluntarily by school districts, as of July I986, were screening observations (69.5 percent) with 24.5 percent being summative observations. For a limited number of observations, (290 or 6 percent) the information was unclear or not complete on the front of the FPMS instrument, thus failing to indicate the type of observation. Modifications have been made in the instrument to alleviate these problems.

Table 3 shows the representation by colleges and universities in the data base. Of the 4,811 observations, some 311(6.5 percent) had missing information. Note that in 2,841 or 59.1% of the observations received, the college where the beginning teacher was trained is located outside the state of Florida. Of the remaining 1,659 or 34.5 percent of the observations, most of the major state universities were well represented: FAMU (33), FSU (262), FAU (225), UNF (140), UF (249) and USF (262). The University of Miami (21) is not as well represented since they use the TADS instrument for evaluating teachers in the Dade County school district.

Table 3

Number of Observations by College of Beginning Teacher Origin

1986

College	Frequency	Percent
Barry College	5	0.1
Bethune Cookman	19	0.4
Biscayne College	1	0.0
FIT	13	0.3
Clearwater Christian	4	0.1
Edward Waters	14	0.3
FIU	14	0.3
FAMU	33	0.7
Florida Memorial	4	0.1
Fla. Southern	85	1.8
FSU	262	5.5
Eckard College	2	0.0
FAU	225	4.7
UCF	88	1.8
Flagler College	19	0.4
Jacksonville	47	1.0
UNF	140	2.9
NOVA	15	0.3
Palm Beach Atlantic	21	0.4
Rollins	4	0.1
Stetson	15	0.3
St. Leo College	31	0.6
UF	249	5.2
UM	21	0.4
UT	21	0.4
USF	262	5.5
UWF	34	0.7
Warner Southern	8	0.2
Southeastern BIB	4	0.1
Out of State	2841	59.1
Unknown	311	6.5
Total	4811	100.0

Table 4 shows that 47 school districts voluntarily submitted beginning teacher observations to the DOE for inclusion in the statewide data base. Of those districts, Palm Beach had the largest number of beginning teacher observations (848) followed by Duval (582) and Broward (570). Although several school districts are not included, making these data incomplete, this table helps to illustrate the size of the Beginning Teacher Program and, therefore, its potential importance in improving the quality of teaching in Florida.

Table 4

Number of Observations by District of Employment

1986

District	Frequency	Percent
Alachua	83	1.7
Baker	1	0.0
Bay	68	1.4
Bradford	23	0.5
Brevard	282	5.9
Broward	570	11.8
Calhoun	14	0.3
Charlotte	1	0.0
Citrus	74	1.5
Clay	183	3.8
Collier	104	2.2
Columbia	16	0.3
Dade	15	0.3
DeSoto	12	0.3
Duval	582	12.1
Escambia	2	0.0
Flagler	13	0.3
Franklin	9	0.2
Gadsden	34	0.7
Gulf	13	0.3
Hamilton	11	0.2
Hardee	7	0.2

Table 4 (Continued)

District	Frequency	Percent
Hernando	227	4.7
Highlands	15	0.3
Hillsborough	8	0.2
Indian River	17	0.4
Jackson	21	0.4
Lafayette	19	0.4
Lake	41	8.5
Lee	159	3.3
Levy	21	0.4
Liberty	3	0.1
Madison	30	0.6
Martin	6	0.1
Monroe	42	0.9
Nassau	41	0.9
Okeechobee	35	0.7
Osceola	78	2.0
Palm Beach	848	17.6
Pasco	278	5.8
Pinellas	8	0.2
Polk	344	7.2
St. Lucie	131	2.7
Santa Rosa	2	0.0
Sarasota	15	0.3
Wakulla	12	0.3
Walton	3	0.1
Special	22	0.5
Unknown	268	4.5
Total	4811	100.0

The Value of Centralized Data Analysis

Centralized data analysis requires the creation and maintenace of a common data base built from the same measures following standardized procedures across a defined population. For example, in the case of the Beginning Teacher Program it means that measures of classroom performance are collected using a validated observation system and trained and certified observers. Copies of these

instruments are submitted to the DOE for processing and creation of a statewide data base recording the performance of beginning teachers

Analyses of these data allow colleges and districts to assess the effectiveness of their respective preservice and inservice teacher training programs and for the State to monitor the quality of beginning teacher performance. Results of such analyses document the strengths and weaknesses demonstrated by beginning teachers in the classroom. Such analyses are not possible without this data base.

Teacher evaluation is comparative. There presently exist no absolute values set on validated measures of performance that separate effective from ineffective teachers. We are dependent upon normed scores on validated measures of performance that provide ranges of scores on which standards can be set.

In order to norm performance measures and keep norm scores current, accurate evaluations of beginning teachers across districts must be received and analyzed on an on-going basis and feedback from these analyses must be submitted to districts, colleges of education and the Department of Education. It is through this type of procedure that the comparative performance of beginning teachers will become a matter of record that can be used to systematically improve teacher training programs whether they be preservice or inservice programs. This is the function of centralized data analysis.

As noted above, the Department of Education has taken initial steps to develop a system of evaluation, procedures for analyzing evaluations and the creation of data processing agency for the purposes outlined above. One teacher evaluation system that has been validated and for which beginning teacher norm scores have been created is the Florida Performance Measurement System. The agency charged with the responsibility of centralized scoring of the FPMS is the Teacher

Evaluation and Assessment Center at the University of South Florida. The TEAC has entered beginning teacher observation data into automated files for which formats for analysis and reporting have been developed and tested for the last two years.

These data serve as an objective and accurate basis upon which to work with individual teachers in the improvement of instruction, target inservice training needs for the general improvement of instruction within districts, and give the State common measures of the quality of performance of beginning teachers.

Recommendations

The following recommendations are provided for purposes of strengthening the data base upon which future analyses can provide information for the evaluation and further improvement of the BTP. These recommendations are founded on more than two years' experience of TEAC personnel in the processing of beginning teacher observations and on the results of FPMS reliability, norming and predictive validity studies:

1. Make provision in State Board Rule for districts to submit screening and summative observations of beginning teachers to the DOE.

   Purpose: To provide the essential information for developing a quantitative and qualitative data base on the State's beginning teachers.

2. Make provision in State Board Rule for state approval (certification) of persons who observe beginning teachers.

   Purpose: To insure the competence of observers of beginning teacher classroom performance thereby improving the accuracy and consistency of observations.

3. Make provision in State Board Rule for a minimum of three screening observations by three different observers and a minimum of three summative observations by three different observers.

   Purpose: To improve the reliability and validity of beginning teacher evaluation scores by collecting a more representative sample of beginning teacher classroom performance at the beginning and end of the school year.

4. Continue the development and updating of state norm scores based upon beginning teacher classroom performance observations.

   Purpose: State norms provide the basis upon which the DOE and school districts can monitor the performance scores of individuals as well as groups as a means of measuring the quality of beginning teacher classroom instruction on a longitudinal basis.

5. Continue the development and testing of formats and procedures for reporting beginning teacher data to teachers, districts and the DOE.

   Purpose: The type of data and the form in which it is reported must be non-threatening to teachers and districts, yet it must provide a means for comparative measures of performance.

6. Study methods and procedures for establishing more direct relationships between observation data and district inservice training programs as well as a more direct relationship between beginning teacher deficiencies and emphases in preservice teacher training programs.

   Purpose: To save time and resources in training and to improve the effectiveness of training by targeting areas that are being performed least effectively.

Appendices A-I

Appendix A

Florida Performance Measurement System Criterion Videotapes

Regular FPMS

Tape#	Tape Name	Grade Level	Subject	# of Copies
1	Pugh	Kindergarten	Social Studies	32
2	McLendon	Senior High	Chemistry	33
3	Pugh	Kindergarten	Math	21
4	Hecker	11th	English	21
5	Goodwin	6th	English	24
6	Armstrong	12th	English	21
7	Williams	Senior High	Chemistry	24
8	Banks	9th - 10th	Algebra	21

Student Services

Tape#	Tape Name	Grade Level	Subject	# of Copies
1	White	Elementary	Consultation	27
2	Nesbitt	Secondary	Career Counseling	27

Criterion Tapes

Domain 10

Tape#	Tape Name	Grade Level	Subject	# of Copies
1	Pettis	Secondary	Consultation	2
2	Hines	Elementary	Consultation	2

Appendix B

Assessment Material Ordered by
County, Type, and Month
for 1985/1986

County	Type	Month/Year	# of Assessments
Alachua	FPMS New Cert.	10/85	25
		11/85	100
	SS New Cert.	11/85	40
Bay	FPMS Retake	2/86	14
	SS Update	11/85	20
Bradford	FPMS Update	10/85	75
Brevard	FPMS New Cert.	11/85	25
	FPMS Update	10/85	75
		11/85	225
		12/85	25
		3/86	15
	SS New Cert.	1/86	30
		2/86	25
		3/86	1
	SS Update	1/86	130
Broward	FPMS New Cert.	11/85	796
	FPMS Update	10/85	364
		11/85	90
	SS Update	12/85	60
Charlotte	FPMS New Cert.	12/85	4
		1/86	3
	FPMS Update	11/85	40
Citrus	FPMS New Cert.	2/86	15
	FPMS Update	11/85	90
Clay	FPMS New Cert.	11/85	70
		2/86	1
	SS Update	12/85	5
Collier	FPMS Update	11/85	87
Columbia	FPMS Update	11/85	75

Assessment Material Ordered by
County, Type, and Month
for 1985/1986

County	Type	Month/Year	# of Assessments
Desoto	FPMS Update	11/85	11
Duval	FPMS New Cert.	11/85	90
		3/86	100
	FPMS Update	11/85	200
		1/86	200
		2/86	100
	SS Update	11/85	40
Escambia	FPMS Update	10/85	100
		11/85	200
	SS Updateq	12/85	55
Gadsden	FPMS New Cert.	10/85	25
		3/86	7
	SS Update	11/85	33
Hamilton	FPMS Update	11/85	25
	SS Update	1/86	25
Hardee	FPMS Update	12/85	15
Hendry	FPMS New Cert.	10/85	6
	FPMS Update	10/85	30
Hernando	FPMS New Cert.	2/86	30
	FPMS Update	10/85	35
		2/86	70
		3/86	40
Highlands	FPMS Update	10/85	40
Hillsborough	FPMS New Cert.	12/85	250
		2/86	50
	FPMS Update	11/85	300
		12/85	100
	SS Update	11/85	35

Assessment Material Ordered by
County, Type, and Month
for 1985/1986

County	Type	Month/Year	# of Assessments
Indian River	FPMS New Cert.	2/86	12
	FPMS Update	11/85	40
Lake	FPMS Update	11/85	125
Lee	FPMS New Cert.	1/86	30
	FPMS Update	10/85	50
		11/85	100
	SS Update	11/85	17
Leon	FPMS New Case	10/85	35
	FPMS Update	11/85	100
		12/85	30
	SS New Cert.	2/85	15
	SS Update	2/85	10
Manatee	FPMS New Cert.	11/85	33
		2/86	5
	FPMS Update	10/85	45
		11/85	80
Marion	FPMS Update	10/85	93
		11/85	1
	SS New Cert.	11/85	30
	SS Update	11/85	30
Martin	FPMS Update	11/85	75
	SS Update	12/85	35
Monroe	FPMS New Cert.	2/86	40
	FPMS Update	10/85	30
	SS New Cert.	3/86	6
Okaloosa	FPMS New Cert.	11/85	1
		12/85	25
		1/86	20
		2/86	1

Assessment Material Ordered by
County, Type, and Month
for 1985/1986

County	Type	Month/Year	# of Assessments
Okaloosa(Cont.)	FPMS Update	10/85	45
		11/85	135
	SS New Cert.	11/85	40
	SS Update	11/85	36
Okeechobee	FPMS Update	11/85	30
Orange	FPMS Update	10/85	315
		11/85	70
		2/86	30
	SS Update	12/85	90
		1/86	25
Osceola	FPMS Update	10/85	50
	SS Update	12/85	5
Palm Beach	FPMS New Cert.	10/85	100
		11/85	100
		12/85	100
		1/86	100
		2/86	50
	FPMS Update	11/85	300
		12/85	200
		2/86	50
		4/86	50
	FPMS Retake	3/86	50
	SS New Cert.	2/86	200
	SS Update	2/86	30
Pasco	FPMS New Cert.	11/85	1
	FPMS Update	10/85	73
		11/85	110
Pinellas	FPMS Update	10/85	300
	SS New Cert.	3/86	100
	SS Update	12/85	36
		1/86	36

Assessment Material Ordered by
County, Type, and Month
for 1985/1986

County	Type	Month/Year	# of Assessments
Polk	FPMS New Cert.	12/85	10
	FPMS Update	10/85	60
		11/85	61
		12/85	30
		1/86	20
	SS Update	11/85	32
Putnam	FPMS Update	10/85	35
		11/85	120
St. Johns	FPMS Update	12/85	75
	SS Update	12/85	27
St. Lucie	FPMS New Cert.	9/85	30
		10/85	94
	FPMS Update	11/85	244
	SS New Cert.	10/85	50
	SS Update	12/85	35
		1/86	35
Santa Rosa	FPMS Update	10/85	25
		11/85	35
Sarasota	FPMS Update	10/85	100
Seminole	FPMS New Cert.	3/86	75
	FPMS Update	10/85	230
		2/86	50
	SS New Cert.	3/86	50
	SS Update	11/85	50
Sumter	FPMS Update	10/85	11
		11/85	11
Taylor	FPMS New Cert.	11/85	35
	FPMS Update	11/85	25

Appendix B (Continued)

Assessment Material Ordered by
County, Type, and Month
for 1985/1986

County	Type	Month/Year	# of Assessments
Volusia	FPMS New Cert.	10/85	40
		2/86	50
	FPMS Update	11/85	170
Wakulla	FPMS Update	12/85	18
Walton	FPMS Update	11/85	36
Fla. State Univ.	FPMS New Cert.	11/85	30
	FPMS Update	11/85	15
		12/85	10
Lutheran	FPMS New Cert.	1/86	31
	FPMS Update	3/86	15
UF - PK Yonge	FPMS New Cert.	2/86	12
	FPMS Update	10/85	40
FAU - A.D. Henderson	FPMS Update	12/85	17
Beth - Shalom	FPMS New Cert.	11/85	20
		12/85	20
Special	FPMS New Cert.	11/85	20
		12/85	105
		1/86	80
	FPMS Update	10/85	95
		11/85	134
		12/85	20
	SS New Cert.	12/85	22
	SS Update	12/85	20

Appendix C

Example of FPMS Feedback to Observer

FEEDBACK ON PERFORMANCE

COUNTY .....CLAY

NAME		SS NUMBER
BARNES	L	403605171

CODING MANUAL QUIZ: 80% CORRECT

THIS TABLE PRESENTS INFORMATION ON YOUR CODING OF EACH ITEM OF THE OBSERVATION INSTRUMENT.

WE RECOMMEND THAT YOU CONTACT THE PERSON(S) WHO TRAINED YOU FOR ADDITIONAL INFORMATION AND CLARIFICATION ON ITEMS LISTED ON YOUR FEEDBACK REPORT AS OVERCODED OR UNDERCODED

		OBSERVATION 1 TAPE = 4	OBSERVATION 2 TAPE = 1
	EFFECTIVE INDICATORS		
1.	BEGINS INSTRUCTION PROMPTLY	ACCURATE	ACCURATE
2.	HANDLES MATERIAL ORDERLY	OVER CODED	ACCURATE
3.	ORIENTS STUD./MAINT. FOCUS	UNDER CODED	ACCURATE
4.	BEGINNING/ENDING REVIEW	UNDER CODED	ACCURATE
5A.	SINGLE FACTUAL QUESTIONS	UNDER CODED	ACCURATE
5B.	REQUIRES ANALYSIS/REASONS	ACCURATE	UNDER CODED
6.	REC. RESP./CORRECT FEEDBACK	UNDER CODED	UNDER CODED
7.	SPECIFIC ACADEMIC PRAISE	UNDER CODED	OVER CODED
8.	PROVIDE FOR PRACTICE	OVER CODED	UNDER CODED
9.	HW/STWORK ASSIGN/GIVES DIR	UNDER CODED	OVER CODED
10.	CIRCUL. & ASSISSTS STUDENTS	ACCURATE	ACCURATE
11.	CONCEPT TREATMENT	OVER CODED	UNDER CODED
12.	DISCUSS CAUSE-EFFECT	OVER CODED	ACCURATE
13.	STATE/APPLY ACADEMIC RULE	ACCURATE	ACCURATE
14.	CRIT/EVID FOR VALUE JUDGE	OVER CODED	ACCURATE
15.	EMPHASIZE IMPORTANT POINTS	UNDER CODED	OVER CODED
16.	EXPRESS ENTHUS./CHALLANGE	ACCURATE	ACCURATE
19.	BODY BEHAV. SHOWS INTEREST	ACCURATE	OVER CODED
20.	STOPS MISCONDUCT	UNDER CODED	ACCURATE
21.	MAINTAINS INSTRUCT MOMENTUM	ACCURATE	ACCURATE
	INEFFECTIVE INDICATORS		
1.	DELAYS	ACCURATE	ACCURATE
2.	NOT ORGANIZED/MATERIALS	ACCURATE	ACCURATE
3.	TALK UNRELATED TO TOPIC	UNDER CODED	ACCURATE
5A.	MULT QUEST/UNISON RESPONSE	ACCURATE	ACCURATE
5B.	NON-ACADEMIC QUESTIONS	ACCURATE	UNDER CODED
6.	IGNORING,SARCASM, DISGUST	ACCURATE	ACCURATE
7.	GENERAL,NONSPECIFIC PRAISE	ACCURATE	ACCURATE
8.	EXTENDS DISCOURSE	ACCURATE	ACCURATE
9.	NO HOMEWORK/FEEDBACK	ACCURATE	ACCURATE
10.	CIRCULATES INADEQUATELY	ACCURATE	ACCURATE
11.	GIVES DEF/EXAMPLES ONLY	ACCURATE	ACCURATE
12.	CAUSE OR EFFECT ONLY	ACCURATE	ACCURATE
13.	DOES NOT ST/APPLY ACAD RULE	ACCURATE	ACCURATE
14.	VALUE JUDGE WITH NO CRIT	ACCURATE	ACCURATE
17.	VAGUE,SCRAMBLED DISCOURSE	ACCURATE	ACCURATE
18.	GRATING/INAUDIBLE TALK	ACCURATE	ACCURATE
19.	DEADPAN/LETHARGIC	ACCURATE	ACCURATE
20.	DELAYS DESIST/PUNITIVE	OVER CODED	ACCURATE
21.	LOSES MOMENTUM	ACCURATE	ACCURATE

Example of FPMS Feedback to Trainer

---------GROUP FEEDBACK ON ACCURACY PERFORMANCE---------

PRIMARY TRAINER ..... NONE LISTED
DATE 60586
SECONDARY TRAINER ..... NONE LISTED
COUNTY ..... MURRAY STATE(82)

NUMBER OF APPLICANTS 28

PERCENT OF APPLICANTS PASSING ACCURACY 86

PERCENT OF APPLICANTS PASSING CODING EXAM 100

PERCENT OF APPLICANTS PASSING COGNITIVE 100

THIS TABLE PRESENTS INFORMATION ON GROUP PERFORMANCE FOR EACH ITEM ON THE OBSERVATION INSTRUMENT. RESPONSES HAVE BEEN CATEGORIZED AS UNDERCODED, ACCURATE, AND OVERCODED.

THE NUMBERS REPORTED ARE THE PERCENT OF APPLICANTS FROM THIS EXAM FALLING INTO EACH OF THE CATEGORIES.

		TAPE= 5			TAPE= 8		
		UNDER CODING	ACCURATE CODING	OVER CODING	UNDER CODING	ACCURATE CODING	OVER CODING
	EFFECTIVE INDICATORS						
1.	BEGINS INSTRUCTION PROMPTLY	0	100	0	0	100	0
2.	HANDLES MATERIAL ORDERLY	0	57	43	11	89	0
3.	ORIENTS STUD./ MAINT. FOCUS	4	96	0	4	96	0
4.	BEGINNING / ENDING REVIEW	0	100	0	0	32	68
5A.	SINGLE FACTUAL QUESTIONS	11	89	0	25	75	0
5B.	REQUIRES ANALYSIS/REASONS	0	100	0	11	89	0
6.	REC. RESP./CORRECT FEEDBACK	21	79	0	50	50	0
7.	SPECIFIC ACADEMIC PRAISE	4	93	4	0	93	7
8.	PROVIDE FOR PRACTICE	0	54	46	36	64	0
9.	HW/STWORK ASSIGN/GIVES DIR	25	75	0	7	89	4
10.	CIRCUL. & ASSISSTS STUDENTS	4	96	0	0	96	4
11.	CONCEPT TREATMENT	43	57	0	0	61	39
12.	DISCUSS CAUSE-EFFECT	0	89	11	0	50	50
13.	STATE/APPLY ACADEMIC RULE	0	14	86	14	86	0
14.	CRIT/EVID FOR VALUE JUDGE	0	96	4	0	96	4
15.	EMPHASIZE IMPORTANT POINTS	25	75	0	7	93	0
16.	EXPRESS ENTHUS./CHALLANGE	0	86	14	0	43	57
19.	BODY BEHAV. SHOWS INTEREST	0	96	4	32	68	0
20.	STOPS MISCONDUCT	0	100	0	0	100	0
21.	MAINTAINS INSTRUCT MOMENTUM	0	86	14	0	79	21
	INEFFECTIVE INDICATORS						
1.	DELAYS	0	100	0	0	96	4
2.	NOT ORGANIZED/MATERIALS	43	57	0	0	100	0
3.	TALK UNRELATED TO TOPIC	0	82	18	0	86	14
5A.	MULT QUEST/UNISON RESPONSE	0	100	0	0	100	0
5B.	NON-ACADEMIC QUESTIONS	21	79	0	18	82	0
6.	IGNORING,SARCASM, DISGUST	0	100	0	0	96	4
7.	GENERAL,NONSPECIFIC PRAISE	0	68	32	18	82	0
8.	EXTENDS DISCOURSE	0	100	0	0	100	0
9.	NO HOMEWORK/FEEDBACK	0	86	14	0	93	7
10.	CIRCULATES INADEQUATELY	64	36	0	0	79	21
11.	GIVES DEF/EXAMPLES ONLY	0	68	32	0	93	7
12.	CAUSE OR EFFECT ONLY	0	100	0	0	100	0
13.	DOES NOT ST/APPLY ACAD RULE	0	96	4	0	96	4
14.	VALUE JUDGE WITH NO CRIT	0	100	0	0	100	0
17.	VAGUE,SCRAMBLED DISCOURSE	0	100	0	0	100	0
18.	GRATING/INAUDIBLE TALK	0	100	0	0	100	0
19.	DEADPAN/LETHARGIC	0	100	0	0	100	0
20.	DELAYS DESIST/PUNITIVE	0	96	4	0	100	0
21.	LOSES MOMENTUM	0	100	0	0	100	0

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Appendix E

Number of Approved Observers (Discounting Remediations)
By County and Type of Application

County	Type of Application		
Frequency	New	Upd	Total
Alachua	13	58	71
Baker	4	6	10
Bay	31	35	66
Bradford	2	11	13
Brevard	11	135	146
Broward	117	502	619
Calhoun	1	11	12
Charlotte	3	22	25
Citrus	7	60	67
Clay	34	53	87
Collier	2	43	45
Columbia	3	36	39
Dade	2	0	2
DeSoto	2	6	8
Dixie	0	7	7
Duval	149	195	344
Escambia	73	130	203
Flagler	0	3	3
Franklin	2	7	9
Gadsden	5	25	30
Gilchrist	1	3	4
Glades	0	2	2
Gulf	2	8	10
Hamilton	1	13	14
Hardee	0	12	12
Total	1149	3880	5029

(continued)

Number of Approved Observers (Discounting Remediations)
By County and Type of Application

County	Type of Application		
Frequency	New	Upd	Total
Hendree	1	16	17
Hernando	27	34	61
Highlands	1	20	21
Hillsborough	77	259	336
Holmes	1	6	7
Indian River	5	37	42
Jackson	5	42	47
Jefferson	2	2	4
Lafayette	0	2	2
Lake	3	68	71
Lee	23	87	110
Leon	28	48	76
Levy	0	9	9
Liberty	0	4	4
Madison	0	11	11
Manatee	40	57	97
Marion	4	53	57
Martin	2	18	20
Monroe	1	18	19
Nassau	2	23	25
Okaloosa	1	55	56
Okeechobee	0	15	15
Orange	19	2261	245
Osceola	35	41	76
Palm Beach	132	320	452
Total (continued)	1149	3880	5029

Appendix E (continued)

Number of Approved Observers (Discounting Remediations)
By County and Type of Application

County	Type of Application		
Frequency	New	Upd	Total
Pasco	19	91	110
Pinellas	40	213	253
Polk	31	165	196
Putnam	3	25	28
St. Johns	1	30	31
St. Lucie	4	48	52
Santa Rosa	14	30	44
Sarasota	3	60	63
Seminole	23	125	148
Sumter	4	17	21
Suwanee	0	11	11
Taylor	13	19	32
Union	0	1	1
Volusia	54	80	134
Wakulla	0	13	13
Walton	2	25	27
Washington	2	13	15
F.S.U.	0	1	1
Lutheran Schools	0	1	1
U.C.F.	7	0	7
P.K. Yonge	5	0	5
A.D. Henderson	9	4	13
Fl. Sch. Deaf & Blind	3	7	10
Leon Weissburg	21	1	22
Special	17	46	63
Total	1149	3880	5029

Appendix F

Number of Approved Student Services Observers
By County and Type of Application

County	Type of Application		
Frequency	New	Upd	Total
	1	0	1
Alachua	0	13	13
Bay	0	8	8
Bradford	2	0	2
Brevard	22	42	64
Broward	5	109	114
Charlotte	0	1	1
Citrus	0	5	5
Clay	0	11	11
Collier	0	4	4
Columbia	0	5	5
Dade	0	153	153
Duval	0	22	22
Escambia	0	35	35
Gadsden	0	4	4
Glades	0	1	1
Gulf	0	1	1
Hamilton	0	1	1
Hendry	0	3	3
Hernando	0	2	2
Hillsborough	0	18	18
Jackson	0	3	3
Lake	0	5	5
Lee	0	11	11
Leon	2	5	7
Levy	1	0	1
Total (continued)	73	786	859

Appendix F (continued)

Number of Approved Student Services Observers
By County and Type of Application

County	Type of Application		
Frequency	New	Upd	Total
Manatee	0	13	13
Marion	0	24	24
Martin	0	14	14
Monroe	0	3	3
Nassau	0	3	3
Okaloosa	0	6	6
Okeechobee	0	3	3
Orange	0	77	77
Osceola	0	5	5
Palm Beach	24	22	46
Pasco	0	10	10
Pinellas	0	14	14
Polk	0	23	23
Putnam	2	4	6
St. Johns	1	2	3
St. Lucie	5	40	45
Santa Rosa	0	3	3
Sarasota	0	4	4
Seminole	2	29	31
Sumter	0	3	3
Taylor	0	2	2
Volusia	0	16	16
Walton	0	1	1
Washington	0	1	1
Unknown	6	0	6
Special	0	2	2
Total	73	786	859

Appendix G

PROCEDURES FOR MASTER TEACHER PROGRAM

(WorkTask 2.3)

PROCESSING OBSERVATION INSTRUMENTS

1.0 Receive observation instruments from counties, and begin processing.

2.0 Separate observations with logs (A) from observations without logs (B).

3.0 Clean instruments (A) with logs and verify that they match accompanying log. Batch and process.

4.0 Clean instruments (B) without logs and batch separately.

5.0 If instrument does not meet required specifications:

5.1 Complete the appropriate (FPMS, Student Services, Library Media or TADS) instrument checklist, indicating miscoded or omitted information. Indicate on the log that observation instrument is being returned, attach checklist to instrument and log and place in a group to be returned to the principal (via the district representative) for corrections.

5.2 Stamp date returned on each instrument.

5.3 Copy the front page of each instrument and file according to county.

5.4 Enter information into batch log.

5.5 Hold instruments for mailing until step 6.5 is completed.

6.0 If instrument meets required specifications:

6.1 Separate instruments into groups of 50 (50 instruments = 1 batch).

6.2 Verify number of instruments in each batch.

6.3 Assign number to each batch, marking number on Accurate Key Punch (AKP) packaging envelope. Batch numbers consist of a 7 digit number. The first 4 digits represent the date received (MMDD), and the next 2 digits represent the number of batches processed that day. The last digit (7) represents the type of instrument, in which 1 = FPMS, 2 = students services, 3 = library media, 4 = TADS. Batch numbers will also serve as identification numbers for referring to specific observation instruments.

6.4 Enter information into batch log:

Accepted for Processing

1) Batch number
2) Date instrument sent to AKP
3) Date instrument returned from AKP
4) Date notification of receipt sent to district

Returned for Corrections

1) Date instrument returned to principal (via the district representative) for corrections
2) Number of instruments returned on date

6.5 Log the batched, numbered AKP envelopes on the appropriate (FPMS, Student Services, Library Media, or TADS) AKP verification sheet.

7.0 Mail observations with logs, which are being returned for corrections to principals, to the district representative.

8.0 AKP receives the instruments for keypunching and verification.

9.0 Receive data tape and instruments from AKP.

9.1 Verify number of batches returned from AKP.

9.2 Update AKP batch log.

10.0 File observations by batch number.

DATA PROCESSING

A. Complete University Computing Services form, attach to AKP data tape and deliver externally labeled tape to SVC (Student Services Center).

B. Transfer AKP data to system tapes, receive AKP data tape from SVC, and store tape for re-use. Internally retain permanent TEAC storage tapes--update weekly.

C. Verify that the number of records on tape corresponds to the number of records submitted.

D. Merge certified observer file with AKP file. Generate a list of uncertified observers (observers listed on AKP file, but not listed on certified list). Notify district representatives of uncertified observers.

E. Create merged and non-merged files (two or one observation) for each applicant group.

F. Generate notification of receipt cards, by district, by school from data tape. Mail to county contact person.

G. For observations not accompanied by log, generate lists for each school with candidate's name, social security number and batch number. Return list with verified log and receipt cards.

DATA ANALYSIS (TADS NOT INCLUDED)

A. All FPMS Instruments - Items will be standardized for length of observation and scaled according to the quartile-based system (Reference: Norming Study). Normed scores from the 1984-85 Master Teacher Program will be used for scoring the 1985-86 Master Teacher observations. Individual items receive a scaled score of 0, 1 or 2 (ineffective indicators receive only 0 or 1) based on the

number of behaviors recorded on that item, by comparing the number of tallies with the quartile points determined from the item distributions:

Distribution Percentile (P)		Scale Points	
Effective	Ineffective	Effective*	Ineffective
1P - 24P	1P - 49P	0	1
25P - 74P	50P - 99P	1	0
75P - 99P		2	

* Scale points of 0, 1 or 2 apply except for item #1 (Begins Promptly) which may only occur once. Thus, scale points for item #1 are 0 or 1.

These item scale points are summed over all items on the instrument yielding a total instrument score. The corrections for elementary vs. secondary and lesson formats in classrooms will be incorporated into this procedure. The scaled scores for the two observations will be averaged to produce the single performance score. Separate distributions of performance scores will be developed for student services, library media, and instructional personnel. Score conversions to T-scores will be determined using the 1984-85 distributions.

B. Student Services - Items will be scaled according to the quartile-based system developed in the 1984-85 MTP. After items are adjusted for the length of the observation, frequency will be compared to the item frequency distributions obtained from last year's MTP applicants. Items are scored 0 or 1 (for below or above the median, item frequency). Item scale scores are summed to yield a total instrument score. Instrument scores for the two observations are averaged and converted to a T-score using the mean and standard deviation from last year's Student Services observation distribution.

C. Library Media - Items are scored as the proportion of indicators acknowledged as having been evident in the observation. Item proportions are summed to yield a total instrument score and instrument scores across the observations for each

candidate will be averaged to yield a total observation score. The distribution of total observation scores will be analyzed and the obtained mean and standard deviation will be used to convert scores to T-scores.

Both Student Service and Library/Media observations will be held in the TEAC until after April 15 when scores will be reported to the DOE.

D. Send data type to DOE.

E. Retain copy of master tape in Assessment Center.

APPEAL PROCESS (RE-EVALUATIONS)

A. Receive third observations from principals.

B. Process instruments following regular MTP processing procedures.

C. Recompute individual T-scores using the following procedures:

1) If one of the three observations, or sets of observations, is discrepant by at least 2 S.D. (standard deviations), it is disregarded and the other two are averaged.

2) If none is discrepant by at least 2 S.D., the average of the three is taken.

3) If all three differ from each other by at least 2 S.D., the middle score is used.

D. Send data tape to the DOE The DOE will produce and mail sealed reevaluation percentile scores to candidates.

E. Retain a copy of the master tape in the assessment center.

Appendix H

Master Teacher Program 1985/86
Raw Score Distributions
Level = Elementary

UNIVARIATE

VARIABLE=SCORE RAW SCORE

MOMENTS

N	2122	SUM WGTS	2122
MEAN	39.6264	SUM	84037.1
STD DEV	5.08416	VARIANCE	25.8487
SKEWNESS	-0.303927	KURTOSIS	0.355972
USS	3336892	CSS	54825
CV	12.82302	STD MEAN	0.110369
T:MEAN=0	359.0236	PROB>|T|	0.0001
SGN RANK	1126252	PROB>|S|	0.0001
NUM ^= 0	2122		

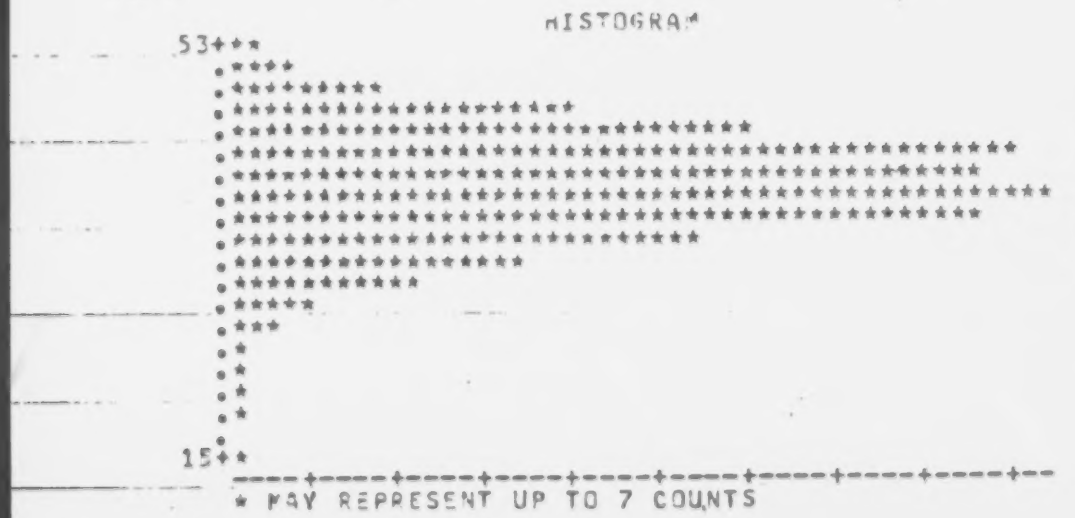
QUANTILES(DEF=4)

100% MAX	53.5	99%	50.5
75% Q3	43	95%	47.5
50% MED	39.5	90%	46
25% Q1	36.5	10%	33
0% MIN	15.5	5%	31
		1%	26.5
RANGE	38		
Q3-Q1	6.5		
MODE	41		

EXTREMES

LOWEST	HIGHEST
15.5	52.5
19.5	53
21	53
22	53
22	53.5

HISTOGRAM



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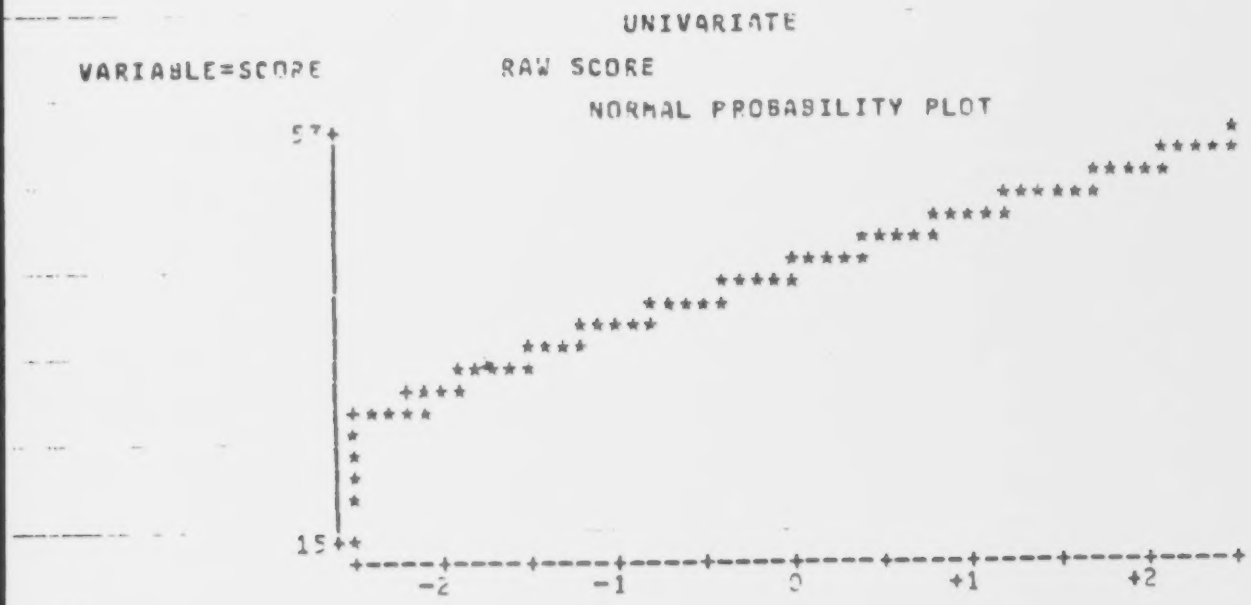
62	|
138	|
210	|
314	+-----+
297	| |
328	*--+--*
299	+-----+
196	|
115	|
73	|
32	|
19	0
6	0
6	0
1	0
1	0
1	*

Master Teacher Program 1985/86
Raw Score Distributions
Level = Elementary



Master Teacher Program 1985/86
Raw Score Distributions
Level = Elementary

RAW SCORE

SCORE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
15.5	1	0.0	1	0.0
19.5	1	0.0	2	0.1
20	1	0.0	3	0.1
22	2	0.1	5	0.2
22.5	3	0.1	8	0.3
23	3	0.1	11	0.4
23.5	1	0.0	12	0.4
24	4	0.1	16	0.6
24.945	1	0.0	17	0.6
25	2	0.1	19	0.7
25.5	2	0.1	21	0.8
26	2	0.1	23	0.9
26.5	3	0.1	26	1.0
27	3	0.1	29	1.1
27.5	5	0.2	34	1.3
27.6	2	0.1	36	1.4
27.945	1	0.0	37	1.4
28	4	0.1	41	1.6
28.5	1	0.0	42	1.6
29	10	0.4	52	2.0
29.5	4	0.2	56	2.1
30	10	0.4	66	2.5
30.5	6	0.2	72	2.8
30.6	1	0.0	73	2.8
30.945	1	0.0	74	2.8
31	18	0.7	92	3.5
31.2	1	0.0	93	3.6
31.39	1	0.0	94	3.6
31.445	1	0.0	95	3.6
31.5	21	0.8	116	4.4
31.945	1	0.0	117	4.5
32	22	0.8	139	5.3
32.5	16	0.6	155	5.9
32.6	1	0.0	156	6.0
33	35	1.3	191	7.3
33.39	2	0.1	193	7.4
33.5	31	1.2	224	8.6
33.945	1	0.0	225	8.6
34	29	1.1	254	9.7
34.17	1	0.0	255	9.8
34.5	49	1.9	304	11.7
34.6	1	0.0	305	11.7
34.945	1	0.0	306	11.7
35	55	2.1	361	13.8
35.1	1	0.0	362	13.8
35.5	42	1.6	404	15.4
35.6	2	0.1	406	15.5
35.945	1	0.0	407	15.5
36	56	2.1	463	17.7
36.5	73	2.8	536	20.5
36.53	1	0.0	537	20.5
36.6	1	0.0	538	20.5
36.945	1	0.0	539	20.6
37	76	2.9	615	23.5
37.1	2	0.1	617	23.6
37.445	1	0.0	618	23.6
37.5	77	2.9	695	26.6
37.89	1	0.0	696	26.6
37.945	1	0.0	697	26.6
38	77	2.9	774	29.5
38.03	1	0.0	775	29.6
38.1	1	0.0	776	29.6
38.445	1	0.0	777	29.7
38.465	1	0.0	778	29.7
38.5	86	3.3	864	33.0
38.53	77	2.9	941	35.9

Master Teacher Program 1985/86
Raw Score Distributions
Level = Elementary

RAW SCORE

SCORE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
38.6	1	0.0	903	42.6
38.945	1	0.0	904	42.6
39	86	4.1	990	46.7
39.23	1	0.0	991	46.7
39.1	1	0.0	992	46.7
39.5	73	3.4	1065	50.2
39.945	1	0.0	1066	50.2
39.96	1	0.0	1067	50.3
40	67	3.2	1134	53.4
40.03	1	0.0	1135	53.5
40.1	1	0.0	1136	53.5
40.445	1	0.0	1137	53.6
40.5	71	3.3	1208	56.9
41	89	4.2	1297	61.1
41.1	1	0.0	1298	61.2
41.14	1	0.0	1299	61.2
41.5	64	3.0	1363	64.2
41.6	1	0.0	1364	64.3
42	81	3.8	1445	68.1
42.1	3	0.1	1448	68.2
42.2	2	0.1	1450	68.3
42.39	2	0.1	1452	68.4
42.5	82	3.9	1534	72.3
42.53	1	0.0	1535	72.3
42.6	1	0.0	1536	72.4
42.7	2	0.1	1538	72.5
42.945	1	0.0	1539	72.5
43	69	3.3	1608	75.8
43.03	1	0.0	1609	75.8
43.5	1	0.0	1610	75.9
43.445	1	0.0	1611	75.9
43.45	1	0.0	1612	76.0
43.5	62	2.9	1674	78.9
43.545	1	0.0	1675	78.9
43.6	2	0.1	1677	79.0
43.945	1	0.0	1678	79.1
44	59	2.8	1737	81.9
44.5	58	2.7	1795	84.6
44.53	1	0.0	1796	84.6
44.6	1	0.0	1797	84.7
45	44	2.1	1841	86.8
45.1	2	0.1	1843	86.9
45.445	1	0.0	1844	86.9
45.5	43	2.0	1887	88.9
45.53	1	0.0	1888	89.0
46	35	1.6	1923	90.6
46.1	1	0.0	1924	90.7
46.5	36	1.7	1960	92.4
46.89	1	0.0	1961	92.4
47	33	1.6	1994	94.0
47.1	1	0.0	1995	94.0
47.5	31	1.5	2026	95.5
48	17	0.8	2043	96.3
48.1	1	0.0	2044	96.3
48.5	17	0.8	2061	97.1
48.6	1	0.0	2062	97.2
49	15	0.7	2077	97.9
49.1	1	0.0	2078	97.9
49.5	10	0.5	2088	98.4
50	10	0.5	2098	98.9
50.1	1	0.0	2099	98.9
50.5	7	0.3	2106	99.2
51	3	0.1	2109	99.4
51.2	1	0.0	2110	99.4
51.5	3	0.1	2113	99.6
52	4	0.2	2117	99.8
52.5	1	0.0	2118	99.8
53	3	0.1	2121	100.0
53.5	1	0.0	2122	100.0

Master Teacher Program 1985/86
Raw Score Distributions
Level = Secondary

UNIVARIATE

VARIABLE=SCORE RAW SCORE

MOMENTS

N	2731	SUM WGTS	2731
MEAN	35.5274	SUM	97025.3
STD DEV	5.8536	VARIANCE	34.2647
SKEWNESS	-0.152585	KURTOSIS	0.0680391
USS	3540599	CSS	93542.5
CV	16.4763	STD MEAN	0.112011
T:MEAN=0	317.177	PROB>|T|	0.0001
SGN RANK	1865273	PROB>|S|	0.0001
NUM ^= 0	2731		

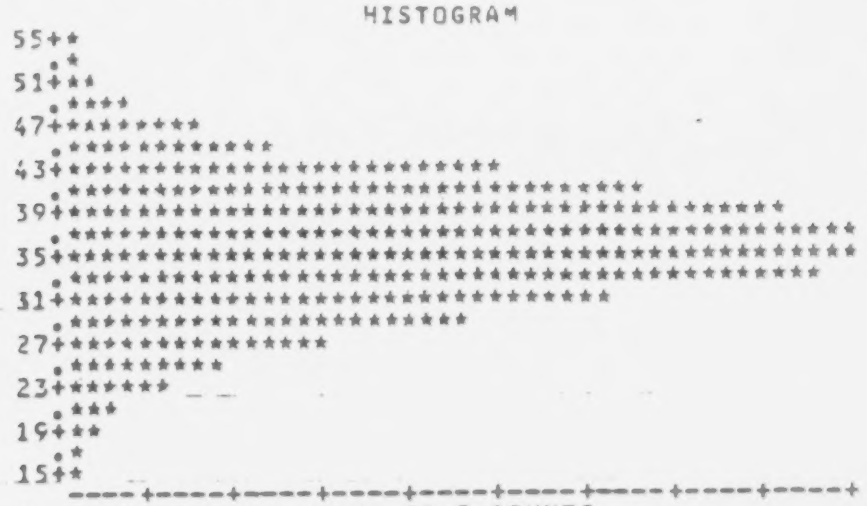
QUANTILES(DEF=4)

100% MAX	55	99%	48.5952
75% Q3	39.5	95%	45
50% MED	35.5	90%	42.994
25% Q1	31.64	10%	28
0% MIN	14	5%	25.5
		1%	21
RANGE	41		
Q3-Q1	7.86		
MODE	36.5		

EXTREMES

LOWEST	HIGHEST
14	51.5
16	51.5
16	52.5
16	54.14
16.5	55

HISTOGRAM



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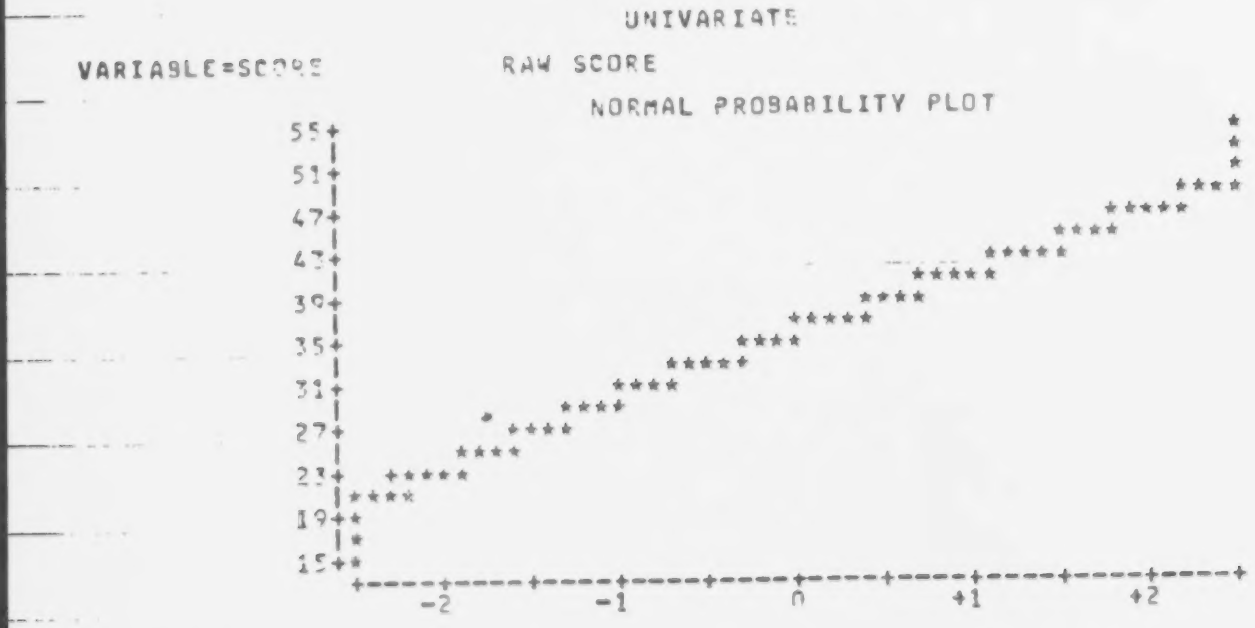
27	|
99	|
96	|
197	|
258	|
326	+-----+
359	| |
358	*--+--*
344	| |
247	+-----+
192	|
120	|
67	|
43	|
18	|
11	0
5	0
1	0

Master Teacher Program 1985/86
Raw Score Distributions
Level = Secondary



Master Teacher Program 1985/86
Raw Score Distributions
Level = Secondary

RAW SCORE

SCORE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
14	1	0.0	1	0.0
16	3	0.1	4	0.1
16.5	1	0.0	5	0.2
17.5	1	0.0	6	0.2
18	1	0.0	7	0.3
18.44	1	0.0	8	0.3
18.47	1	0.0	9	0.3
18.5	2	0.1	11	0.4
19	2	0.1	13	0.5
19.435	1	0.0	14	0.5
19.485	1	0.0	15	0.6
19.5	2	0.1	17	0.7
20.14	1	0.0	18	0.7
20.465	1	0.0	19	0.7
20.5	7	0.3	26	1.0
21	3	0.1	29	1.1
21.43	1	0.0	30	1.1
21.5	4	0.1	34	1.3
21.72	1	0.0	35	1.3
22	2	0.1	37	1.4
22.43	1	0.0	38	1.4
22.44	1	0.0	39	1.4
22.465	1	0.0	40	1.5
22.47	1	0.0	41	1.5
22.5	5	0.2	46	1.7
22.64	1	0.0	47	1.7
22.94	1	0.0	48	1.8
22.965	1	0.0	49	1.8
22.97	2	0.1	51	1.9
23	10	0.4	61	2.3
23.14	2	0.1	63	2.4
23.47	1	0.0	64	2.4
23.5	12	0.4	76	2.8
23.64	1	0.0	77	2.9
23.965	1	0.0	78	2.9
24	12	0.4	90	3.3
24.14	1	0.0	91	3.3
24.465	3	0.1	94	3.4
24.47	2	0.1	96	3.5
24.5	11	0.4	107	3.9
24.72	2	0.1	109	4.0
24.965	2	0.1	111	4.1
25	8	0.3	119	4.4
25.11	1	0.0	120	4.4
25.14	1	0.0	121	4.4
25.465	3	0.1	124	4.5
25.5	13	0.5	137	5.0
25.605	1	0.0	138	5.1
25.94	1	0.0	139	5.1
25.965	4	0.1	143	5.2
25.97	2	0.1	145	5.3
26	23	0.8	168	6.2
26.11	1	0.0	169	6.2
26.14	1	0.0	170	6.2
26.43	1	0.0	171	6.3
26.465	2	0.1	173	6.3
26.495	1	0.0	174	6.4
26.5	21	0.8	195	7.2
26.605	1	0.0	196	7.2
26.64	1	0.0	197	7.2
26.78	1	0.0	198	7.3
26.93	1	0.0	199	7.3
26.965	1	0.0	200	7.3
26.97	1	0.0	201	7.4
27	26	1.0	227	8.3
27.14	1	0.0	228	8.3
27.43	1	0.0	229	8.4
27.465	4	0.1	233	8.5
27.47	1	0.0	234	8.6

Master Teacher Program 1985/86
Raw Score Distributions
Level = Secondary

RAW SCORE

SCORE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
27.5	21	0.8	255	9.3
27.54	3	0.1	258	9.4
27.965	5	0.2	263	9.6
27.97	2	0.1	265	9.7
28	23	0.8	288	10.5
28.11	1	0.0	289	10.6
28.43	1	0.0	290	10.6
28.44	1	0.0	291	10.7
28.465	2	0.1	293	10.7
28.47	2	0.1	295	10.8
28.5	29	1.1	325	11.9
28.64	2	0.1	327	12.0
28.93	1	0.0	328	12.0
28.935	2	0.1	330	12.1
28.964	1	0.0	331	12.1
28.965	3	0.1	334	12.2
28.97	3	0.1	337	12.3
29	37	1.4	374	13.7
29.14	3	0.1	377	13.8
29.44	1	0.0	378	13.8
29.465	3	0.1	381	14.0
29.47	3	0.1	384	14.1
29.5	45	1.6	429	15.7
29.64	7	0.3	436	16.0
29.78	3	0.1	439	16.1
29.93	1	0.0	440	16.1
29.94	1	0.0	441	16.1
29.965	3	0.1	444	16.3
29.97	3	0.1	447	16.4
30	33	1.2	480	17.6
30.14	2	0.1	482	17.6
30.43	1	0.0	483	17.7
30.465	5	0.2	488	17.8
30.47	2	0.1	490	17.9
30.5	45	1.6	494	18.1
30.61	1	0.0	539	19.7
30.64	4	0.1	540	19.8
30.94	4	0.1	544	19.9
30.965	3	0.1	548	20.1
30.97	2	0.1	551	20.2
31	55	2.0	553	20.2
31.11	1	0.0	608	22.3
31.14	1	0.0	609	22.3
31.43	2	0.1	610	22.3
31.44	3	0.1	612	22.4
31.465	4	0.1	615	22.5
31.47	1	0.0	619	22.7
31.5	60	2.2	620	22.7
31.53	1	0.0	680	24.9
31.61	1	0.0	681	24.9
31.64	2	0.1	682	25.0
31.94	1	0.0	689	25.2
31.965	2	0.1	690	25.3
31.97	3	0.1	692	25.3
32	67	2.5	694	25.4
32.11	1	0.0	761	27.9
32.14	3	0.1	762	27.9
32.28	1	0.0	765	28.0
32.465	5	0.2	766	28.0
32.47	6	0.2	771	28.2
32.5	62	2.3	777	28.5
32.64	4	0.1	839	30.7
32.78	2	0.1	843	30.9
32.935	1	0.0	845	30.9
32.965	4	0.1	846	31.0
33	79	2.9	850	31.1
33.14	3	0.1	929	34.0
33.28	3	0.1	932	34.1
			933	34.2

Master Teacher Program 1985/86
Raw Score Distributions
Level = Secondary

RAW SCORE

SCORE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
33.43	4	0.1	937	34.3
33.44	2	0.1	939	34.4
33.465	6	0.2	945	34.6
33.47	6	0.2	951	34.8
33.5	71	2.6	1022	37.4
33.64	3	0.1	1025	37.5
33.78	1	0.0	1026	37.6
33.93	1	0.0	1027	37.6
33.94	1	0.0	1028	37.6
33.965	4	0.1	1032	37.8
33.97	6	0.2	1038	38.0
34	70	2.6	1108	40.6
34.14	4	0.1	1112	40.7
34.28	2	0.1	1114	40.8
34.43	3	0.1	1117	40.9
34.44	1	0.0	1118	40.9
34.465	5	0.2	1123	41.1
34.5	75	2.7	1198	43.9
34.64	4	0.1	1202	44.0
34.78	2	0.1	1204	44.1
34.965	1	0.0	1205	44.1
34.97	1	0.0	1206	44.2
35	73	2.7	1279	46.8
35.105	1	0.0	1280	46.9
35.14	5	0.2	1285	47.1
35.28	1	0.0	1286	47.1
35.43	1	0.0	1287	47.1
35.44	3	0.1	1290	47.2
35.465	7	0.3	1297	47.5
35.47	1	0.0	1298	47.5
35.5	84	3.1	1382	50.6
35.53	1	0.0	1383	50.6
35.605	1	0.0	1384	50.7
35.64	4	0.1	1388	50.8
35.78	1	0.0	1389	50.9
35.915	1	0.0	1390	50.9
35.93	3	0.1	1393	51.0
35.965	2	0.1	1395	51.1
35.97	1	0.0	1396	51.1
36	78	2.9	1474	54.0
36.14	4	0.1	1478	54.1
36.28	1	0.0	1479	54.2
36.465	4	0.1	1483	54.3
36.47	3	0.1	1486	54.4
36.5	92	3.4	1578	57.8
36.53	1	0.0	1579	57.8
36.64	3	0.1	1582	57.9
36.965	5	0.2	1587	58.1
36.97	2	0.1	1589	58.2
37	82	3.0	1671	61.2
37.14	6	0.2	1677	61.4
37.28	1	0.0	1678	61.4
37.43	2	0.1	1680	61.5
37.44	2	0.1	1682	61.6
37.47	1	0.0	1683	61.6
37.5	56	2.1	1739	63.7
37.61	1	0.0	1740	63.7
37.64	6	0.2	1746	63.9
37.78	1	0.0	1747	64.0
37.93	1	0.0	1748	64.0
37.94	1	0.0	1749	64.0
37.965	3	0.1	1752	64.2
37.97	3	0.1	1755	64.3
38	70	2.6	1825	66.8
38.14	2	0.1	1827	66.9
38.28	2	0.1	1829	67.0
38.465	4	0.1	1833	67.1
38.5	82	3.0	1915	70.1
38.605	1	0.0	1916	70.2

Master Teacher Program 1985/86
Raw Score Distributions
Level = Secondary
RAW SCORE

SCORE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
38.61	1	0.0	1917	70.2
38.64	1	0.0	1918	70.2
38.93	5	0.2	1923	70.4
38.965	1	0.0	1924	70.5
38.97	2	0.1	1926	70.5
39	68	2.5	1994	73.0
39.14	6	0.2	2000	73.2
39.44	1	0.0	2001	73.3
39.47	3	0.1	2004	73.4
39.5	73	2.7	2077	76.1
39.64	2	0.1	2079	76.1
39.78	1	0.0	2080	76.2
39.97	1	0.0	2081	76.2
40	59	2.2	2140	78.4
40.14	2	0.1	2142	78.4
40.43	2	0.1	2144	78.5
40.435	1	0.0	2145	78.5
40.44	1	0.0	2146	78.6
40.465	1	0.0	2147	78.6
40.47	2	0.1	2149	78.7
40.5	62	2.3	2211	81.0
40.6	1	0.0	2212	81.0
40.64	4	0.1	2216	81.1
40.93	2	0.1	2218	81.2
40.935	1	0.0	2219	81.3
40.965	5	0.2	2224	81.4
41	56	2.1	2280	83.5
41.14	1	0.0	2281	83.5
41.465	2	0.1	2283	83.6
41.47	1	0.0	2284	83.6
41.5	51	1.9	2335	85.5
41.64	1	0.0	2336	85.5
41.78	1	0.0	2337	85.6
41.935	1	0.0	2338	85.6
41.965	1	0.0	2339	85.6
42	54	2.0	2393	87.6
42.105	1	0.0	2394	87.7
42.11	1	0.0	2395	87.7
42.14	6	0.2	2401	87.9
42.465	1	0.0	2402	88.0
42.47	3	0.1	2405	88.1
42.5	49	1.8	2454	89.9
42.64	1	0.0	2455	89.9
42.93	1	0.0	2456	89.9
42.965	1	0.0	2457	90.0
42.97	1	0.0	2458	90.0
43	33	1.2	2491	91.2
43.11	1	0.0	2492	91.2
43.14	1	0.0	2493	91.3
43.28	2	0.1	2495	91.4
43.465	1	0.0	2496	91.4
43.5	35	1.3	2531	92.7
43.61	1	0.0	2532	92.7
43.64	2	0.1	2534	92.8
43.965	1	0.0	2535	92.8
43.97	1	0.0	2536	92.9
44	27	1.0	2563	93.8
44.5	20	0.7	2583	94.6
44.57	1	0.0	2584	94.6
44.94	1	0.0	2585	94.7
44.965	1	0.0	2586	94.7
45	24	0.9	2610	95.6
45.07	1	0.0	2611	95.6
45.1	1	0.0	2612	95.6
45.14	1	0.0	2613	95.7
45.43	1	0.0	2614	95.7
45.5	14	0.5	2628	96.2
45.6	1	0.0	2629	96.3
45.665	1	0.0	2630	96.3

Master Teacher Program 1985/86
Raw Score Distributions
Level = Secondary

RAW SCORE

SCORE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
43.94	1	0.0	2631	96.3
45.97	1	0.0	2632	96.4
46	18	0.7	2650	97.0
46.14	1	0.0	2651	97.1
46.5	13	0.5	2664	97.5
46.64	1	0.0	2665	97.6
46.97	1	0.0	2666	97.6
47	12	0.4	2678	98.1
47.43	1	0.0	2679	98.1
47.465	1	0.0	2680	98.1
47.47	1	0.0	2681	98.2
47.5	7	0.3	2688	98.4
47.8	1	0.0	2689	98.5
47.61	1	0.0	2690	98.5
47.64	1	0.0	2691	98.5
48	9	0.3	2700	98.9
48.14	1	0.0	2701	98.9
48.28	1	0.0	2702	98.9
48.5	2	0.1	2704	99.0
48.64	1	0.0	2705	99.0
49	5	0.2	2710	99.2
49.5	7	0.3	2717	99.5
49.94	1	0.0	2718	99.5
50	3	0.1	2721	99.6
50.5	1	0.0	2722	99.7
50.965	1	0.0	2723	99.7
51	1	0.0	2724	99.7
51.14	1	0.0	2725	99.8
51.5	3	0.1	2728	99.9
52.5	1	0.0	2729	99.9
54.14	1	0.0	2730	100.0
55	1	0.0	2731	100.0

Master Teacher Program 1985/86
Raw Score Distributions
Type = L/M

UNIVARIATE

VARIABLE=SCORE RAW SCORE

MOMENTS

N	48	SUM WGTS	48
MEAN	22.5052	SUM	1080.25
STD DEV	3.01281	VARIANCE	9.07703
SKEWNESS	-1.59968	KURTOSIS	2.45942
USS	24737.9	CSS	426.62
CV	13.3872	STD MEAN	0.434862
T:MEAN=0	51.7526	PROB>|T|	0.0001
SGN RANK	588	PROB>|S|	0.0001
NUM ^= 0	48		

QUANTILES(DEF=4)

100% MAX	25	99%	25
75% Q3	24.7083	95%	25
50% MED	23.75	90%	25
25% Q1	21.6542	10%	17.9292
0% MIN	11.7917	5%	16.0937
		1%	11.7917
RANGE	13.2083		
Q3-Q1	3.35417		
MODE	25		

EXTREMES

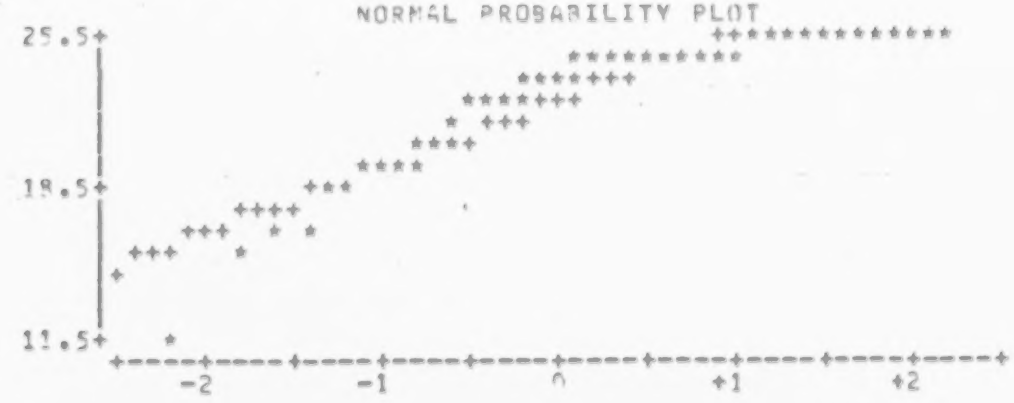
LOWEST	HIGHEST
11.7917	25
16	25
16.2083	25
16.5417	25
18.0833	25

STEM LEAF #

25	0000000	7
24	00123566777777	14
23	027777	6
22	13677	5
21	2	1
20	889	3
19	0689	4
18	17	2
17		
16	025	3
15		
14		
13		
12		
11	8	1

BOXPLOT

NORMAL PROBABILITY PLOT



Master Teacher Program 1985/86
Raw Score Distributions
Level = L/M

RAW SCORE

SCORE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
11.791666667	1	2.1	1	2.1
14	1	2.1	2	4.2
16.208333333	1	2.1	3	6.2
16.541666667	1	2.1	4	8.3
18.083333333	1	2.1	5	10.4
18.75	1	2.1	6	12.5
19.041666667	1	2.1	7	14.6
19.625	1	2.1	8	16.7
19.791666667	1	2.1	9	18.7
19.916666667	1	2.1	10	20.8
20.791666667	1	2.1	11	22.9
20.833333333	1	2.1	12	25.0
20.916666667	1	2.1	13	27.1
21.25	1	2.1	14	29.2
22.083333333	1	2.1	15	31.2
22.333333333	1	2.1	16	33.3
22.625	1	2.1	17	35.4
22.666666667	1	2.1	18	37.5
22.75	1	2.1	19	39.5
22.958333333	1	2.1	20	41.7
23.166666667	1	2.1	21	43.7
23.666666667	2	4.2	23	47.9
23.75	2	4.2	25	52.1
23.958333333	1	2.1	26	54.2
24	1	2.1	27	56.2
24.125	1	2.1	28	58.3
24.25	1	2.1	29	60.4
24.291666667	1	2.1	30	62.5
24.541666667	1	2.1	31	64.6
24.583333333	2	4.2	33	68.7
24.666666667	1	2.1	34	70.8
24.791666667	1	2.1	35	72.9
24.75	1	2.1	39	81.2
24.833333333	1	2.1	40	83.3
24.875	1	2.1	41	85.4
25	7	14.6	48	100.0

Appendix H (Continued)

Master Teacher Program 1985/86
Raw Score Distributions
Type = S/S

UNIVARIATE

VARIABLE=SCORE RAW SCORE

MOMENTS

N	525	SUM WGTS	525
MEAN	29.08	SUM	15267
STD DEV	3.55213	VARIANCE	12.6176
SKEWNESS	-0.358623	KURTOSIS	-0.224924
USS	450576	CSS	6611.04
CV	12.215	STD MEAN	0.155026
T:MEAN=0	187.579	PROB>|T|	0.0001
SGN RANK	69037.5	PROB>|S|	0.0001
NUM ^= 0	525		

QUANTILES(DEF=4)

100% MAX	37	99%	35.5
75% Q3	32	95%	34.5
50% MED	29.5	90%	33.5
25% Q1	27.5	10%	24.5
0% MIN	18	5%	23
		1%	22
RANGE	19		
Q3-Q1	5.5		
MODE	29.5		

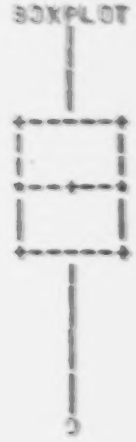
EXTREMES

LOWEST	HIGHEST
18	35.5
19.5	35.5
19.5	35.5
20	36
20	37

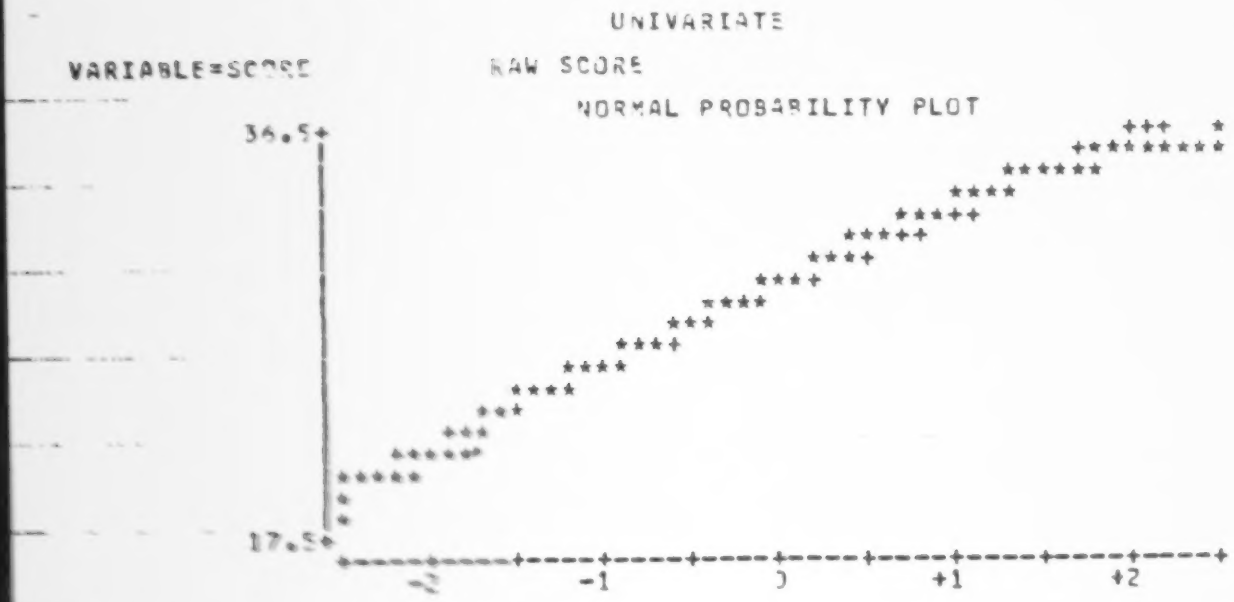
HISTOGRAM

```
36.5+*
     .*****                                                  1
     .***********                                            6
     .****************                                       2
     .**********************                                 3
     .**************************                             4
     .*****************************                          4
     .*****************************************              5
     .****************************                           5
     .************************                               4
     .**************************                             6
     .************************                               6
     .***************                                        3
     .********                                               2
     .*******                                                1
     .***                                                    1
     .***                                                    1
     .***                                                    1
     .*                                                      1
17.5+*
     ----+----+----+----+----+----
     * MAY REPRESENT UP TO 2 COUNTS
```

BOXPLOT



Master Teacher Program 1985/86
Raw Score Distributions
Type = S/S



Master Teacher Program 1985/86
Raw Score Distributions
Type = S/S

RAW SCORE

SCORE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
18	1	0.2	1	0.2
18.5	1	0.2	2	0.4
19.5	1	0.2	3	0.6
20	5	1.0	8	1.5
20.5	1	0.2	9	1.7
21	5	1.0	14	2.7
21.5	4	0.8	18	3.4
22	1	0.2	19	3.6
22.5	6	1.1	25	4.8
23	7	1.3	32	6.1
23.5	3	0.6	35	6.7
24	12	2.3	47	9.0
24.5	12	2.3	59	11.2
25	14	2.7	73	13.9
25.5	18	3.4	91	17.3
26	25	4.8	116	22.1
26.5	19	3.6	135	25.7
27	25	4.8	160	30.5
27.5	22	4.2	182	34.7
28	24	4.6	206	39.2
28.5	26	5.0	232	44.2
29	28	5.3	260	49.5
29.5	34	6.5	294	56.0
30	23	4.4	317	60.4
30.5	30	5.7	347	66.1
31	24	4.6	371	70.7
31.5	19	3.6	390	74.3
32	25	4.8	415	79.0
32.5	20	3.8	435	82.9
33	24	4.6	459	87.4
33.5	16	3.0	475	90.5
34	16	3.0	491	93.5
34.5	16	3.0	507	96.6
35	8	1.5	515	98.1
35.5	8	1.5	523	99.6
36	1	0.2	524	99.8
37	1	0.2	525	100.0

Master Teacher Program 1985/86
Raw Score Distributions
Type = TADS

UNIVARIATE

VARIABLE=SCORE RAW SCORE

MOMENTS

N	672	SUM WGTS	672
MEAN	78.0119	SUM	52424
STD DEV	7.17457	VARIANCE	51.4745
SKEWNESS	-7.38064	KURTOSIS	14.6665
USS	4124235	CSS	34539.4
CV	9.19677	STD MEAN	.276765
T:MEAN=0	281.87	PROB>|T|	0.0001
SGN RANK	113064	PROB>|S|	0.0001
NUM ^= 0	672		

QUANTILES(DEF=4)

100% MAX	82	99%	82
75% Q3	82	95%	82
50% MED	81	90%	82
25% Q1	77.5	10%	71
0% MIN	21	5%	62.975
		1%	44.055

RANGE	61
Q3-Q1	4.5
MODE	82

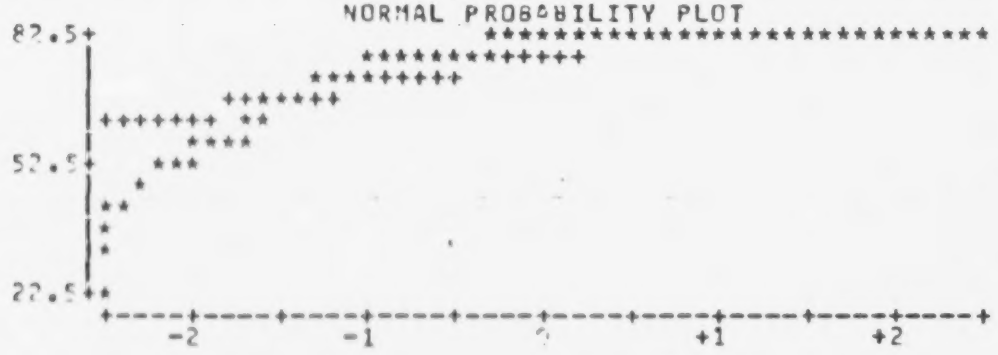
EXTREMES

LOWEST	HIGHEST
21	82
34	82
35.5	82
41	82
41	82

HISTOGRAM

* MAY REPRESENT UP TO 8 COUNTS

NORMAL PROBABILITY PLOT



Master Teacher Program 1985/86
Raw Score Distributions
Type = TADS

RAW SCORE

SCORE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
21	1	0.1	1	0.1
34	1	0.1	2	0.3
35.5	1	0.1	3	0.4
41	2	0.3	5	0.7
41.5	1	0.1	6	0.9
45	1	0.1	7	1.0
49.5	1	0.1	8	1.2
51	1	0.1	9	1.3
52	1	0.1	10	1.5
52.5	1	0.1	11	1.6
53.5	1	0.1	12	1.8
54	1	0.1	13	1.9
54.5	2	0.3	15	2.2
55	2	0.3	17	2.5
55.5	1	0.1	18	2.7
56	1	0.1	19	2.8
56.5	1	0.1	20	3.0
57	2	0.3	22	3.3
57.5	1	0.1	23	3.4
58.5	2	0.3	25	3.7
59	2	0.3	27	4.0
59.5	1	0.1	28	4.2
60.5	2	0.3	30	4.5
61	1	0.1	31	4.6
61.5	1	0.1	32	4.8
62	1	0.1	33	4.9
63.5	2	0.3	35	5.2
64.5	2	0.3	37	5.5
65.5	3	0.4	40	6.0
66	2	0.3	42	6.2
67	2	0.3	44	6.5
67.5	5	0.7	49	7.3
68	1	0.1	50	7.4
68.5	1	0.1	51	7.6
69	5	0.7	56	8.3
69.5	3	0.4	59	8.8
70	3	0.4	62	9.2
70.5	2	0.3	64	9.5
71	7	1.0	71	10.6
71.5	1	0.1	72	10.7
72	5	0.7	77	11.5
72.5	6	0.9	83	12.4
73	6	0.9	89	13.2
73.5	6	0.9	95	14.1
74	10	1.5	105	15.6
74.5	7	1.0	112	16.7
75	9	1.3	121	18.0
75.5	10	1.5	131	19.5
76	8	1.2	139	20.7
76.5	13	1.9	152	22.6
77	13	1.9	165	24.6
77.5	4	0.6	169	25.1
78	16	2.4	185	27.5
78.5	11	1.6	196	29.2
79	32	4.8	228	33.9
79.5	28	4.2	256	38.1
80	32	4.8	288	42.9
80.5	46	6.8	334	49.7
81	61	9.1	395	58.8
81.5	68	10.1	463	68.9
82	209	31.1	672	100.0

Appendix I

Master Teacher Program
Percent of Applicants in Upper Quarter
of Instrument Distribution
by District

County	Upper Quarter (%)	Number of Applicants
Alachua	33	103
Baker	25	4
Bay	54	83
Bradford	50	2
Brevard	36	233
Broward	56	484
Calhoun	50	8
Charlotte	38	16
Citrus	46	50
Clay	26	80
Collier	38	32
Columbia	34	29
Desoto	0	4
Dixie	20	5
Duval	25	326
Escambia	48	218
Flagler	100	2
Franklin	33	3
Gadsden	43	7
Gilchrist	0	3
Glades	0	1
Gulf	33	3
Hamilton	75	4
Hardee	100	4
Hendry	60	10
Hernando	75	16
Highlands	31	13
Hillsborough	59	411
Holmes	57	7
Indian River	19	26
Jackson	64	22
Jefferson	100	1
Lafayette	100	2
Lake	39	49
Lee	60	117
Leon	73	120

Appendix I (Continued)

Master Teacher Program
Percent of Applicants in Upper Quarter
of Instrument Distribution
by District

County	Upper Quarter (%)	Number of Applicants
Levy	36	14
Liberty	50	2
Madison	71	7
Manatee	66	121
Marion	26	74
Martin	25	28
Monroe	43	30
Nassau	21	14
Okaloosa	68	81
Okeechobee	67	15
Orange	55	315
Osceola	34	29
Palm Beach	43	258
Pasco	53	104
Pinellas	31	351
Polk	40	249
Putnam	22	32
St. Johns	28	32
St. Lucie	56	32
Santa Rosa	15	48
Sarasota	41	108
Seminole	30	163
Sumter	50	12
Suwannee	18	11
Taylor	67	3
Union	11	9
Volusia	42	134
Wakulla	70	10
Walton	63	8
Washington	36	11
Fla. School Deaf & Blind	47	17
Fla. St. Dev. Rsch. School	14	7
AD Henderson Univ. Sch.	100	4
Div. of Corrections	0	22